MagiCAD for AutoCAD

Release notes for version 2021 UR-1

12/10/2020

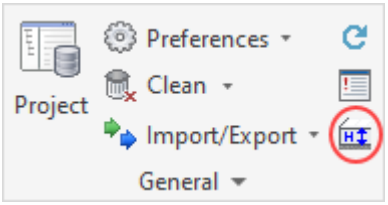
MagiCAD

Content

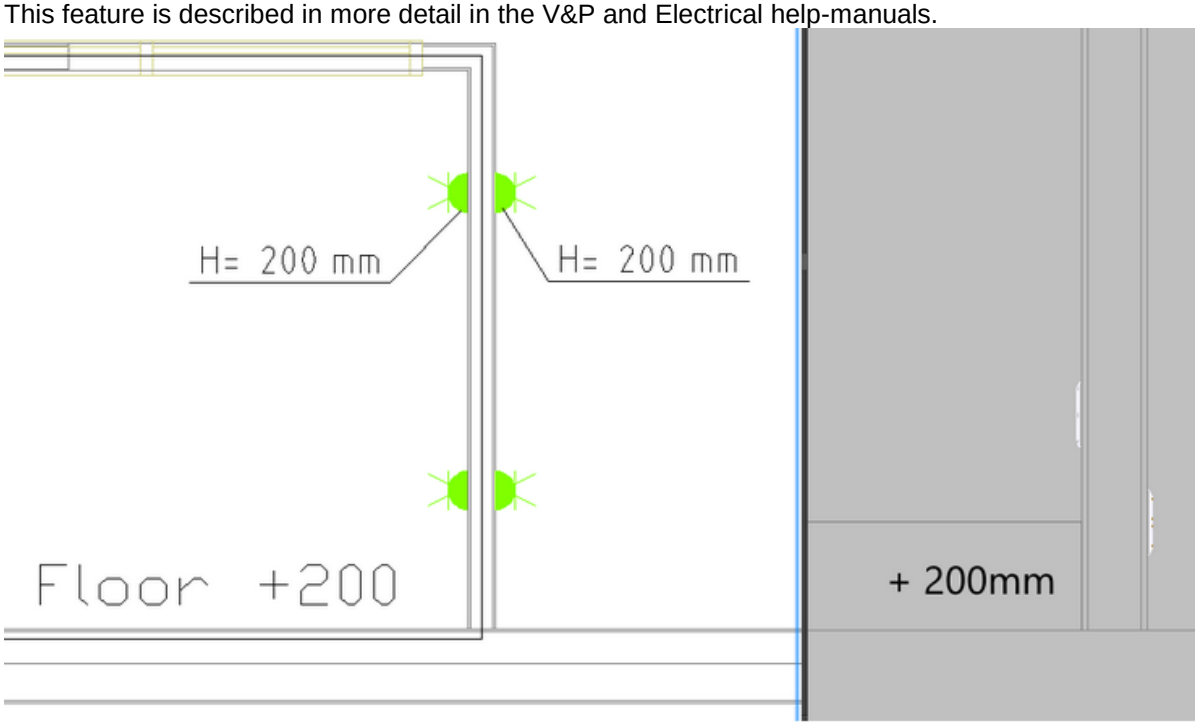
1 New features

1.1 Common

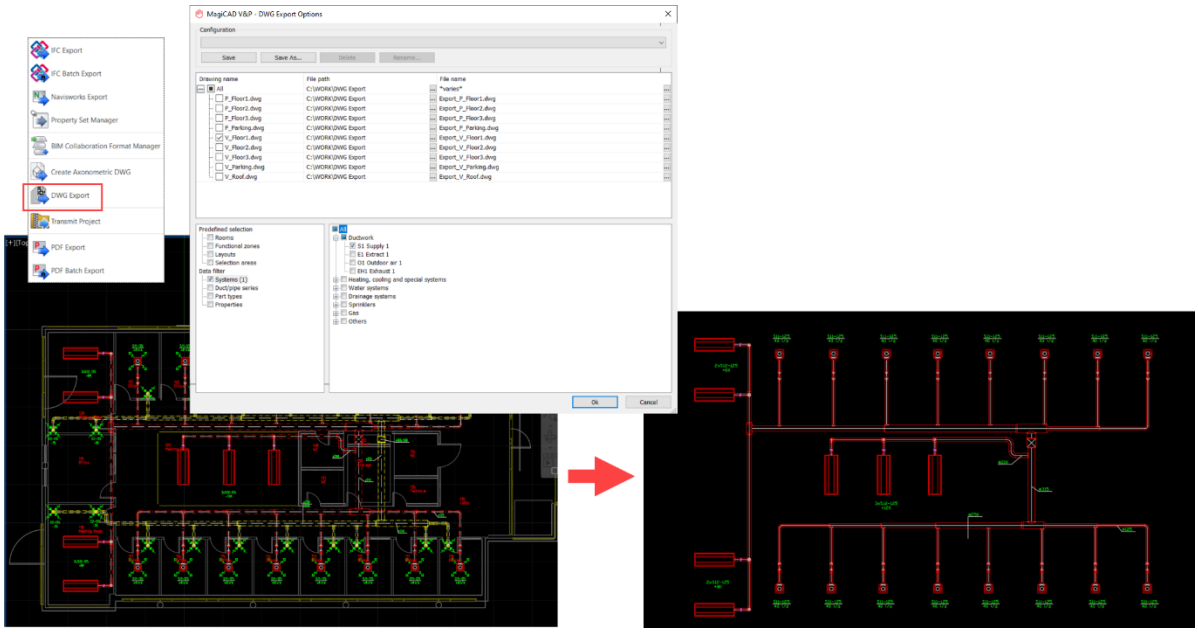
Floor Offset Areas can be set in MagiCAD V&P and Electrical
It is now possible to draw floor areas where raised or lowered floors need to be taken into account in MEP installations. Each area has an offset from the storey it belongs to.



The offset affects the installation functions, modification functions and dimension texts used inside the area when operating with elevations inside the same storey. In addition, each area has a priority setting which creates flexibility e.g. when having smaller areas inside bigger ones.
This feature is described in more detail in the V&P and Electrical help-manuals.



A new DWG Export function to export the selected objects to new drawings
It is now much easier to make copies of the drawings, with precisely the segments and devices that need to be shown in other drawings, with the new DWG Export function. The user can select from which drawings in the project the new drawings should be created and which objects from the original drawings should be in the new copy.
Using MagiCAD's Object Selection Set you can filter out the correct devices, for example when creating false ceiling drawings for the architects.

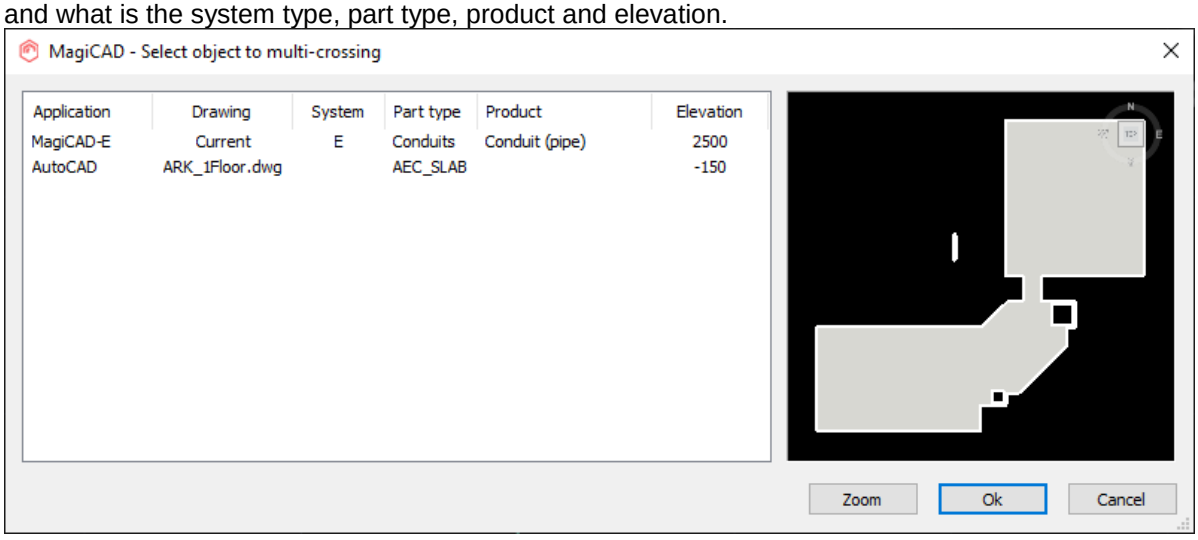


Multicrossing improvements

When selecting to cross over certain parts you can now specify more precisely from what discipline or link you want the crossing to be done:

```
MECTMC Select part over/under which crossing will be drawn [Hpv on mcE on Acad on current Drawing on Xref on]:
```

If there are more than one object that apply to selected filters in the area of the search circle, a dialog pops up where you can select which part you meant to cross over.
From the dialog you select which part you want to cross, you can see from which drawing the part is and what is the system type, part type, product and elevation.

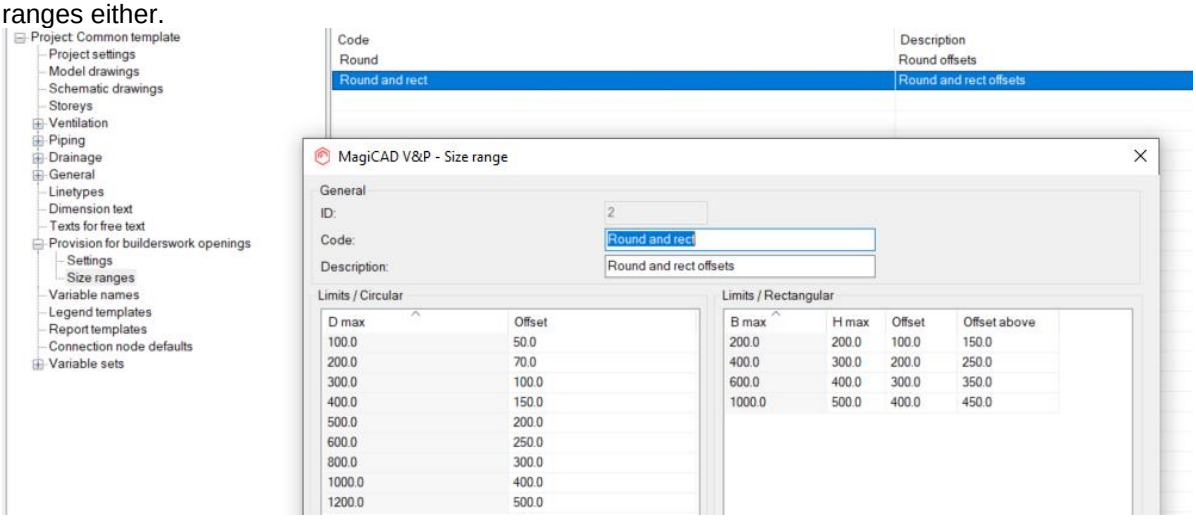


Different offset values can now be set based on the segment's size for Provisions for Builderswork openings

Size ranges for different offsets can now be set in MagiCAD for AutoCAD. Using this function you can vary the offset for the segments depending on their size.

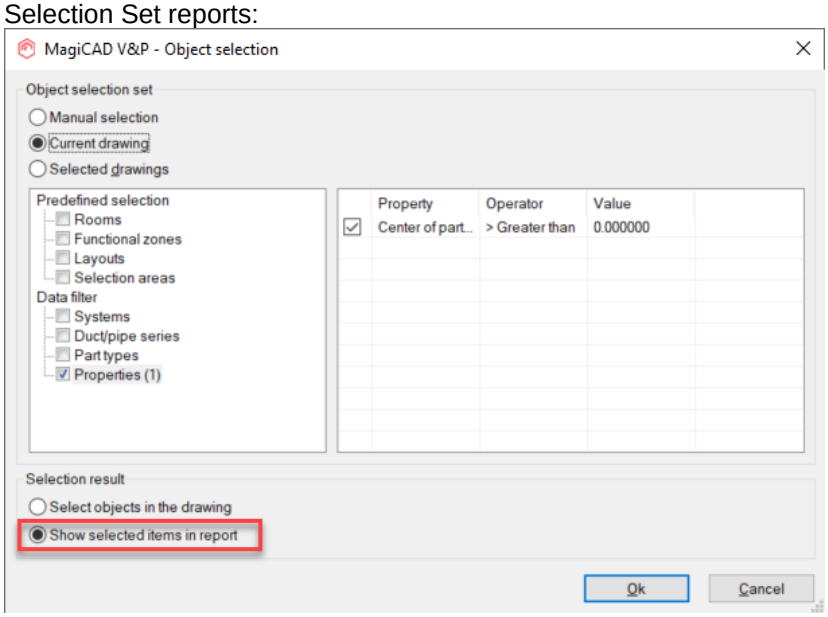
The segments for which these work are pipes and ducts in V&P, Cable trays, LED-stripes and Lighting tracks in Electrcial.

Conduits don't work with automatic provisions with the general settings, so they don't work for the size ranges either.

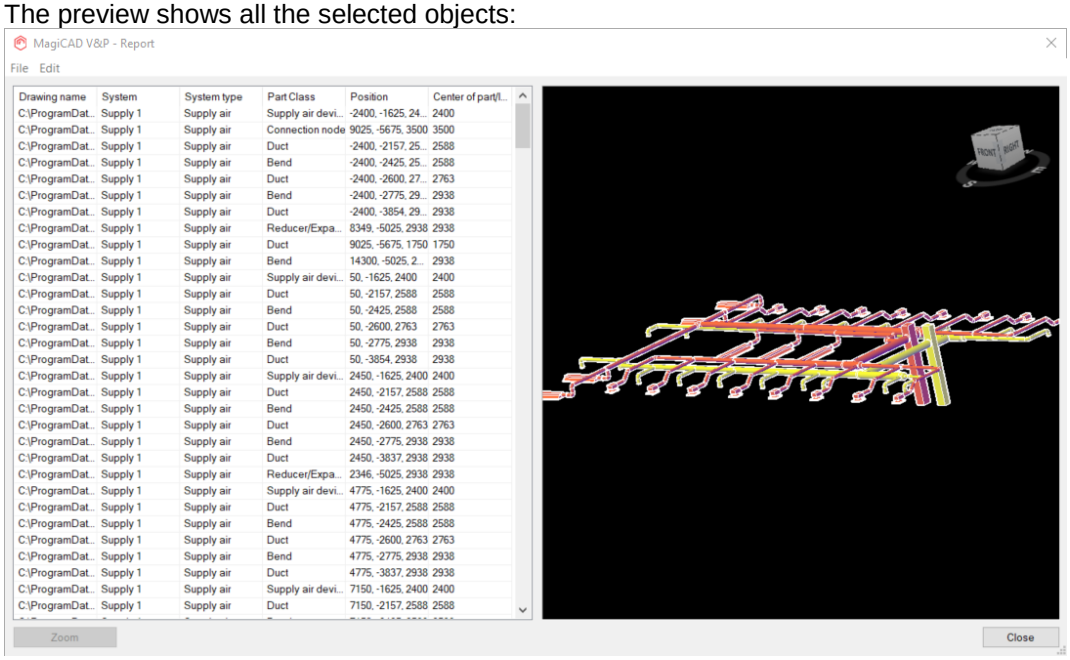


Object Selection improvement with preview for "Show selected items in report"

We added a preview to the V&P (MAGISEL), Electrical (MESEL) and Schematics (MSSEL) Object Selection Set reports:



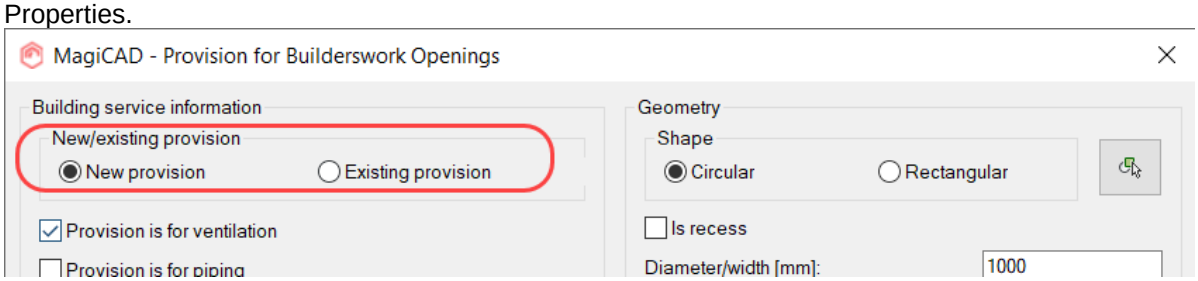
The preview shows all the selected objects:

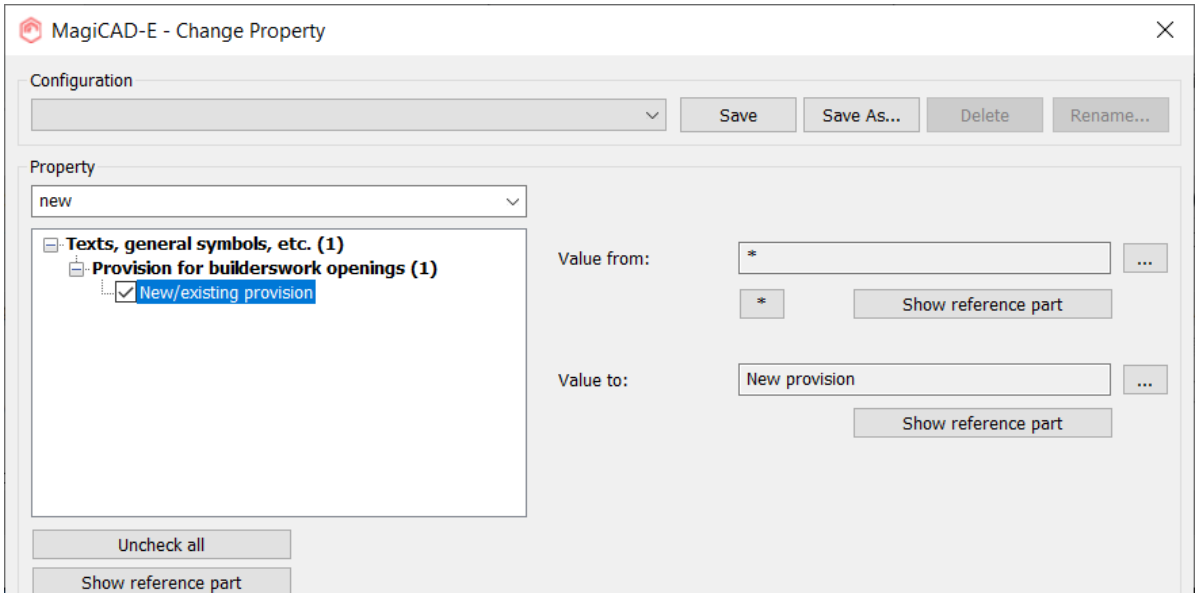


MCACA-2502 The Provision Status can be changed using Change Properties

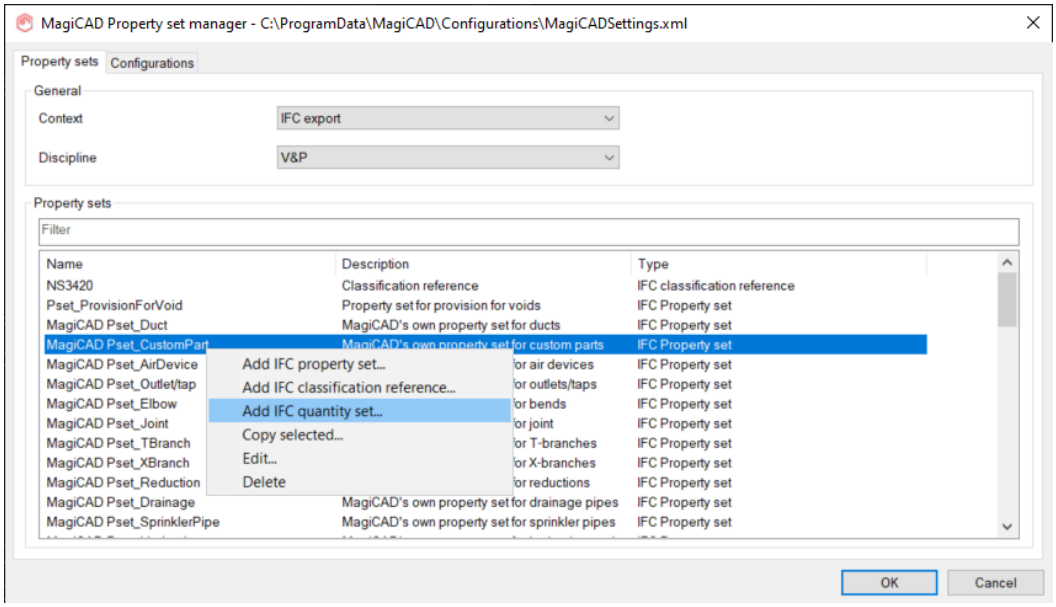
The provision status can be changed using change properties.

Before this update it was done only via the Property Palette to change many, or one by one in Part Properties.

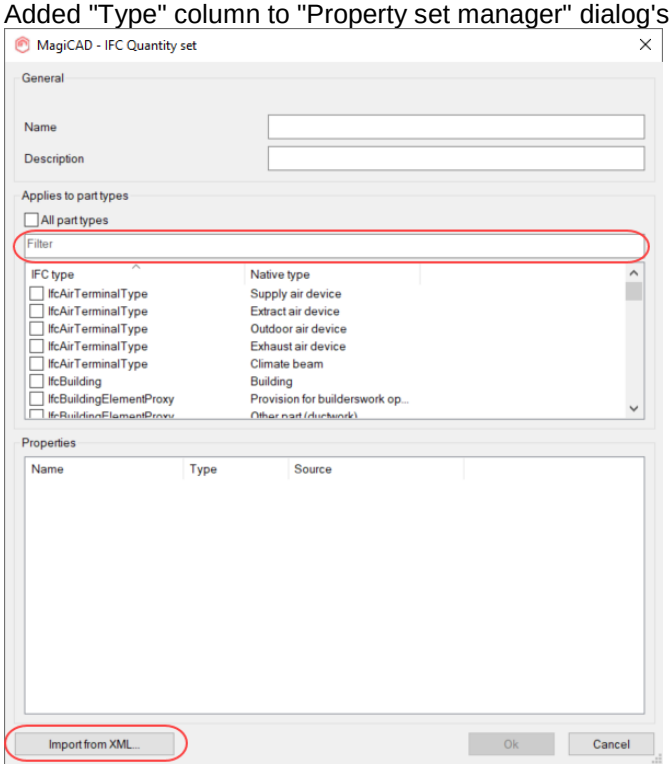




Quantity takeoff property set support
We added support for quantity property sets.
BuildingSMART quantity takeoff XMLs



Added "Import from XML..." button to "IFC Property set" dialog, so that external standards can be imported automatically.
Added "Type" column to "Property set manager" dialog's "Property sets" list view

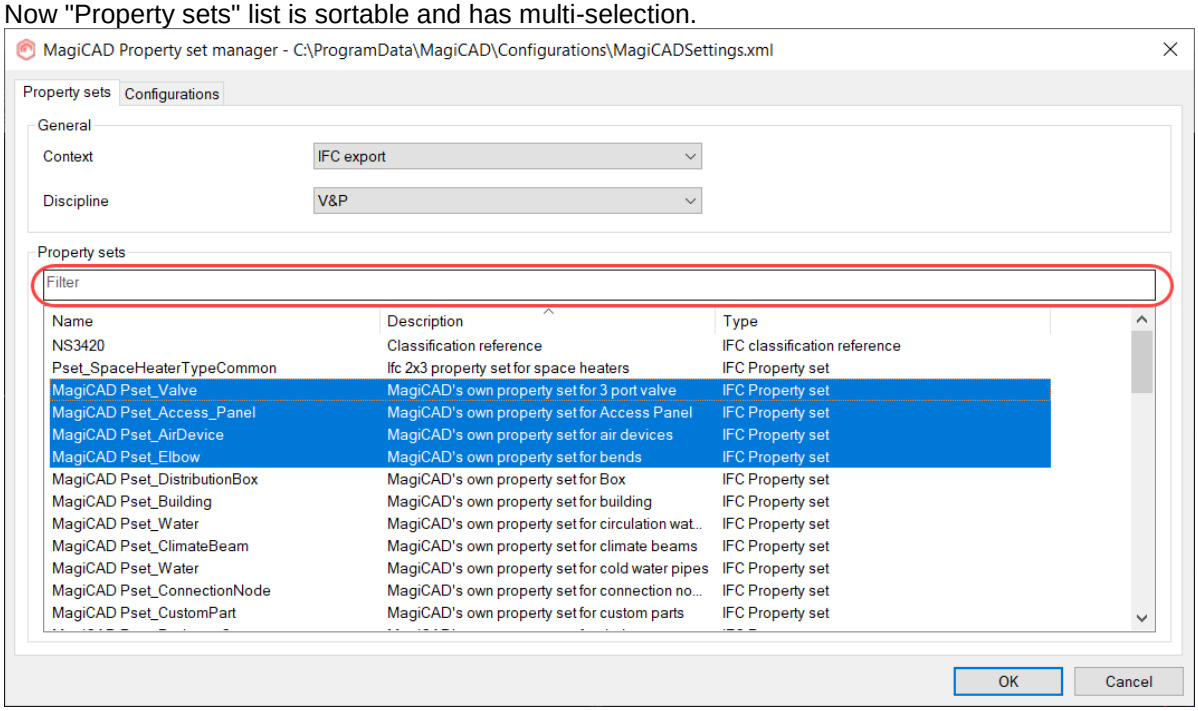


Missing IFC types for the IFC4 certification have been added
We added support for:
IfcCoolingTowerType
IfcSolarDeviceType
IfcLampType
IfcElectricFlowStorageDeviceType
IfcCommunicationsApplianceType
IfcGeographicElementType
IfcCableFittingType
IfcAudioVisualApplianceType
IfcProtectiveDeviceTrippingUnitType

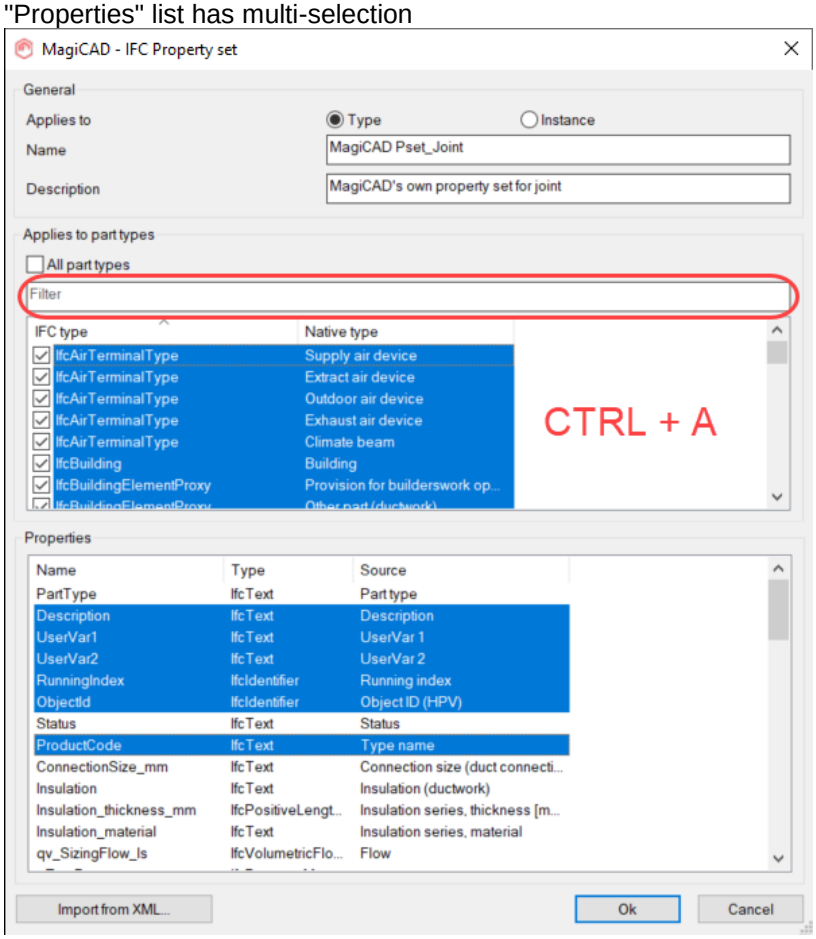
IFC distribution ports support
IFC4 port definitions export has been changed to support the latest IFC4 specifications.
Example of ports fixed in 2020 UR-1, to clarify what it is related to, see "Port definitions had the wrong positions in IFC Export" under resolved issues.

IFC Properties dialogs have been improved
The IFC Property set dialogs have been made more user friendly:

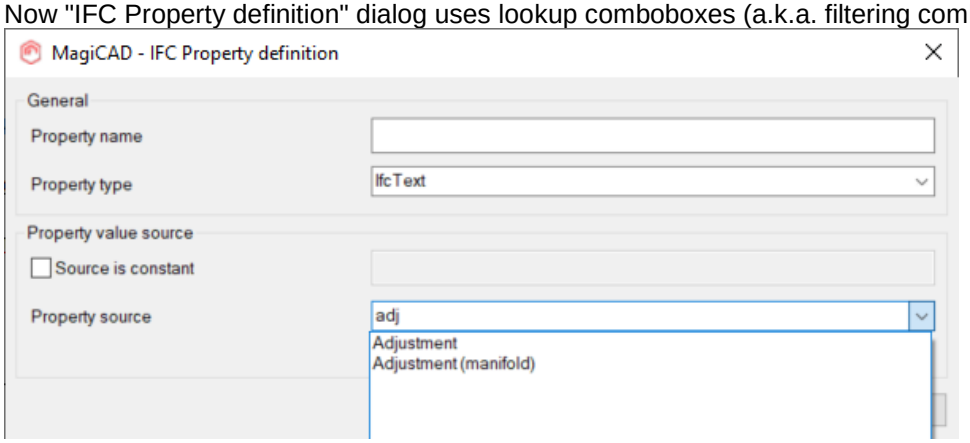
"Property sets" tab of Property Set Manager dialog
Added a filtering editbox,
Now "Property sets" list is sortable and has multi-selection.



IFC Property Set and IFC Classification Reference dialogs:
Are sizeable
Added filter to part types list
Part types and property lists are sortable
Ctrl+A selects all items in part types list
"Properties" list has multi-selection



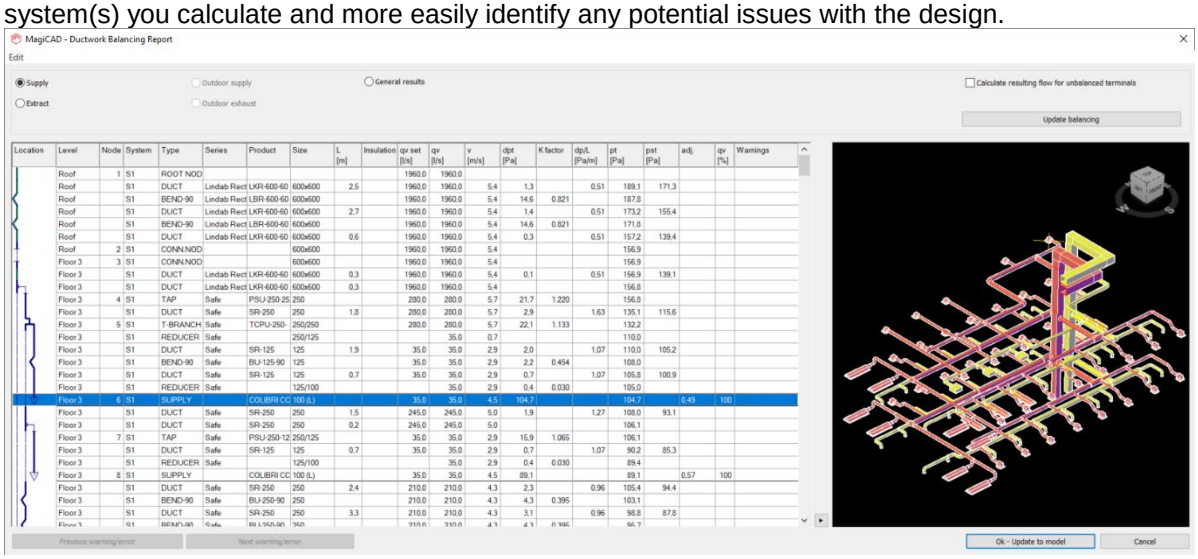
Now "IFC Property definition" dialog uses lookup comboboxes (a.k.a. filtering combobox).



1.2 Ventilation and Piping

Network preview in V&P calculation reports

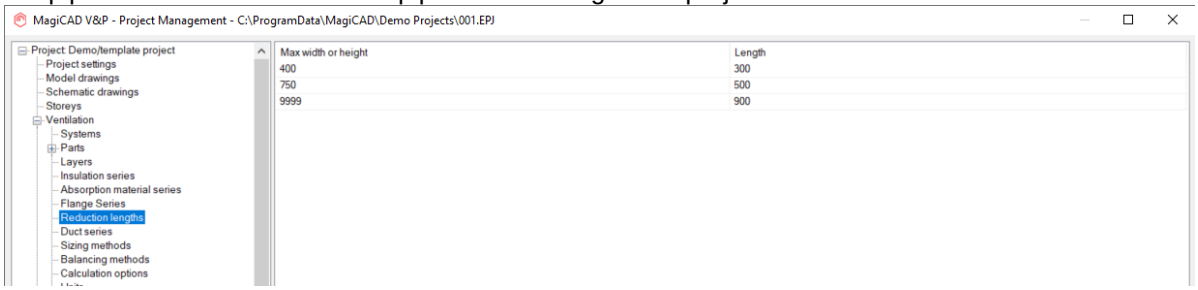
All calculation reports do now have a preview where you can get a much better overview of the system(s) you calculate and more easily identify any potential issues with the design.



Reduction/Expander lengths can now be defined

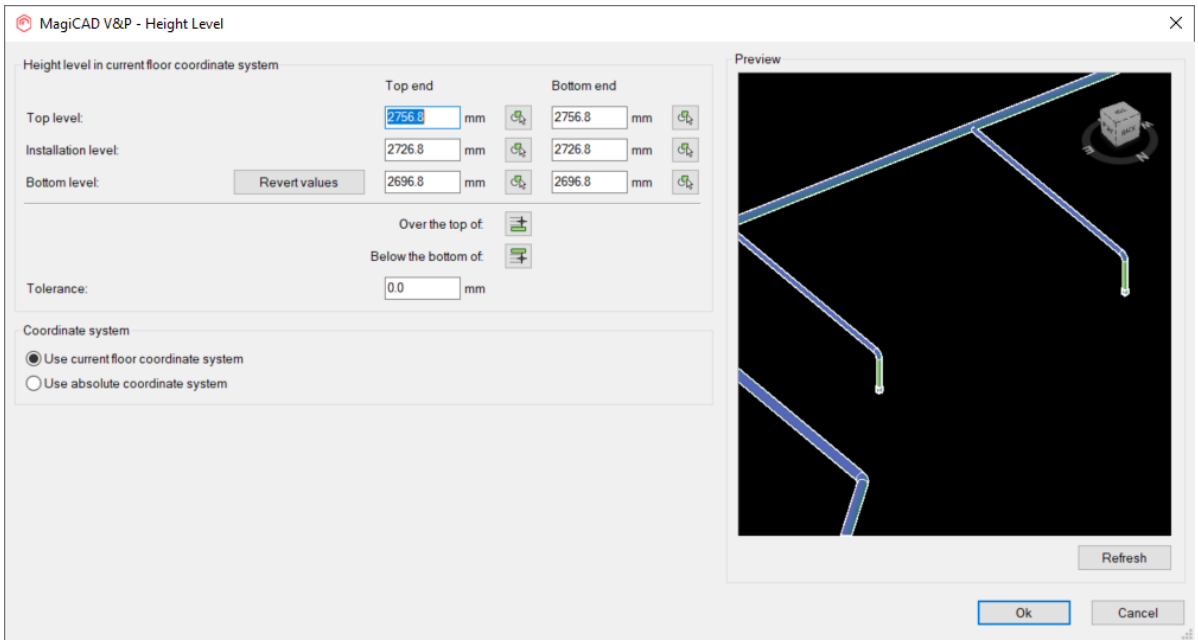
You can now define the specific length of the reducer/expander for ducts and pipes that you need for your design. (drainage pipes not included)

Ducts are defined as a general setting for all duct series (seen below), while the reduction lengths for the pipe series are defined in the pipe series dialog in the project.



Sprinkler and gas pipes do now have the new Change Z that has been previously implemented for drainage pipes

Now we have implemented the same Change Z to sprinkler pipes that we implemented in the 2021 main release for drainage pipes, where the user can review the changes before updating them to the drawing:



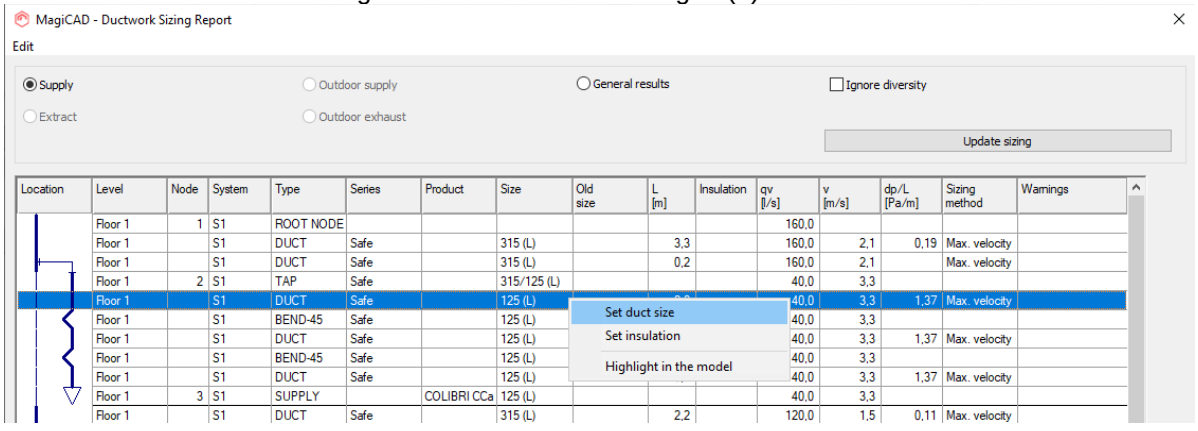
This now shows, in green, which parts will adjust when changing the elevation.
See here how it works for drainage pipes as the same logic is used, if the sprinkler pipes are drawn with a slope.

Settings and functionality for managing of object status

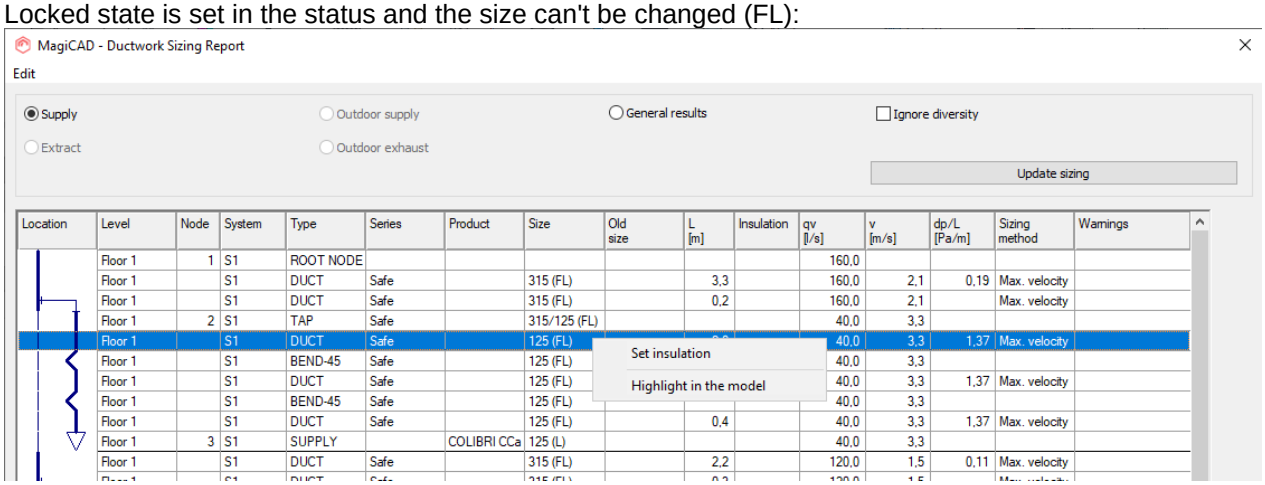
The lock status has been improved to avoid any lock conflicts. When running calculations in earlier versions of MagiCAD on elements with a status where the parts were locked, the locking was then transferred to the segment itself and even when changing the status of the segments to some status that didn't have a locked selection, the segments stayed locked
This does also affect how the locked parts are handled in the calculation reports.

Earlier it was possible to change the size of locked parts, even if the locked state was set in the status. Now it is only possible to change the locked state if it is set in the drawing, but not if it comes from the status. If the locked state is from the status, then this is also designated with (FL), while the parts locked only in the drawing are marked (L)

Locked state set in the drawing and the size can be changed (L):

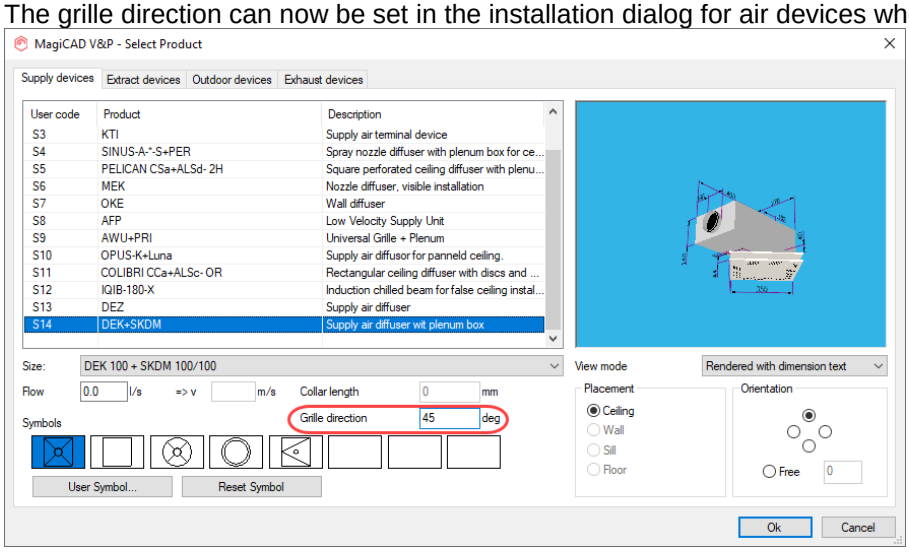


Locked state is set in the status and the size can't be changed (FL):



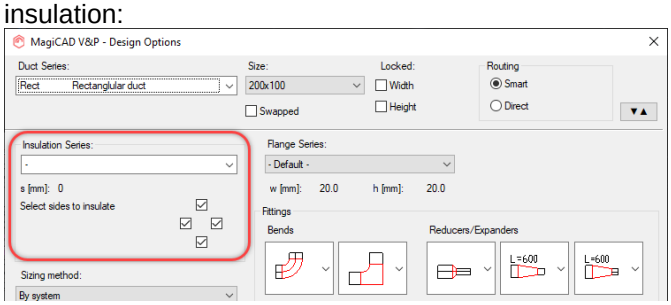
Grill direction setting has been added to the installation dialog for air devices

The grille direction can now be set in the installation dialog for air devices where it can be rotated:

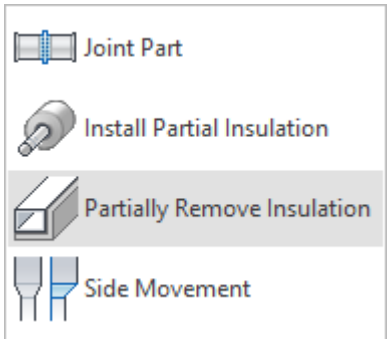


Select which sides will have insulation on rectangular ducts

It is now possible to select which sides, one, two, three or all four of a rectangular duct should have insulation:

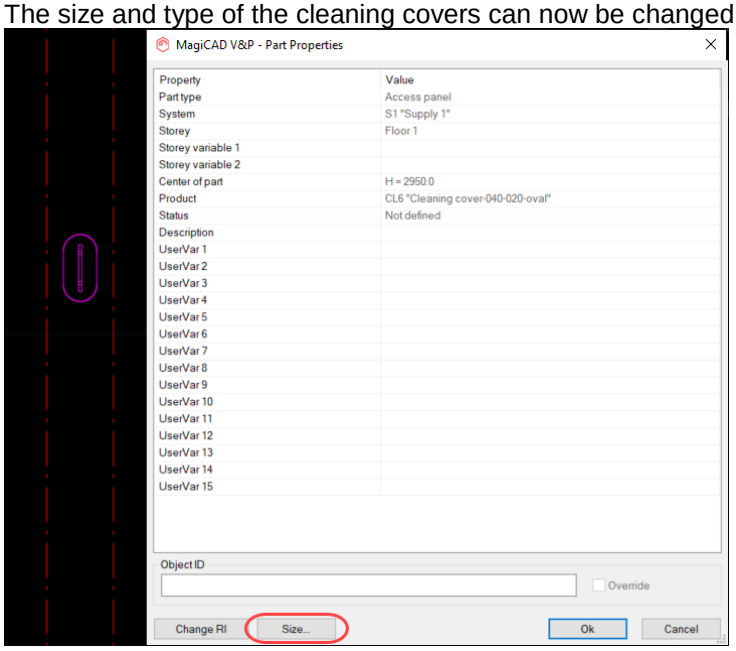


The insulation can also be edited using the new Partially Remove Insulation function.

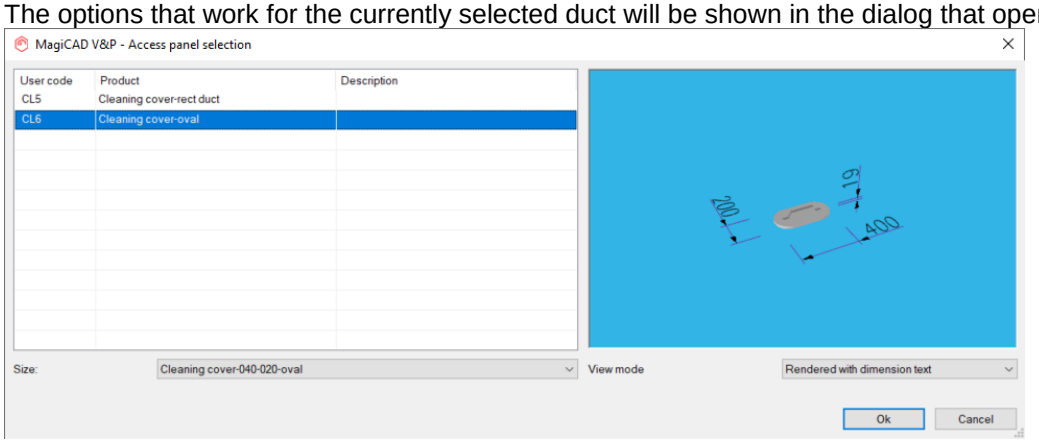


The size of the cleaning covers in duct systems can now be changed after they have been installed

The size and type of the cleaning covers can now be changed in the drawing:

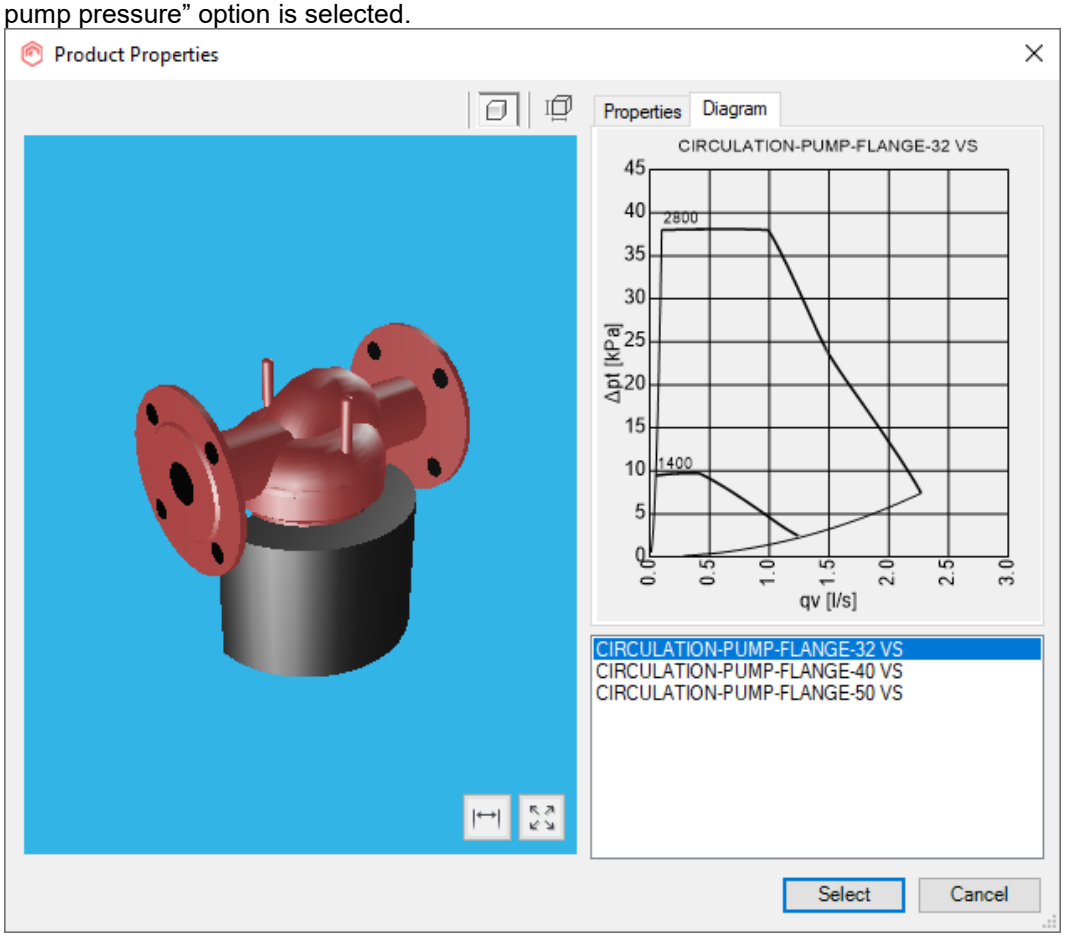


The options that work for the currently selected duct will be shown in the dialog that opens:



Upgrading pump curves

MagiCAD product database supports now variable speed pumps with frequency-controlled steering. The actual duty point of such pumps are calculated in the heating and cooling systems if “Calculate to pump pressure” option is selected.

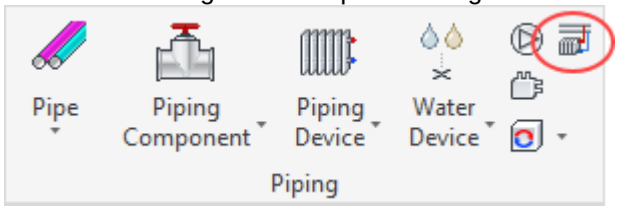


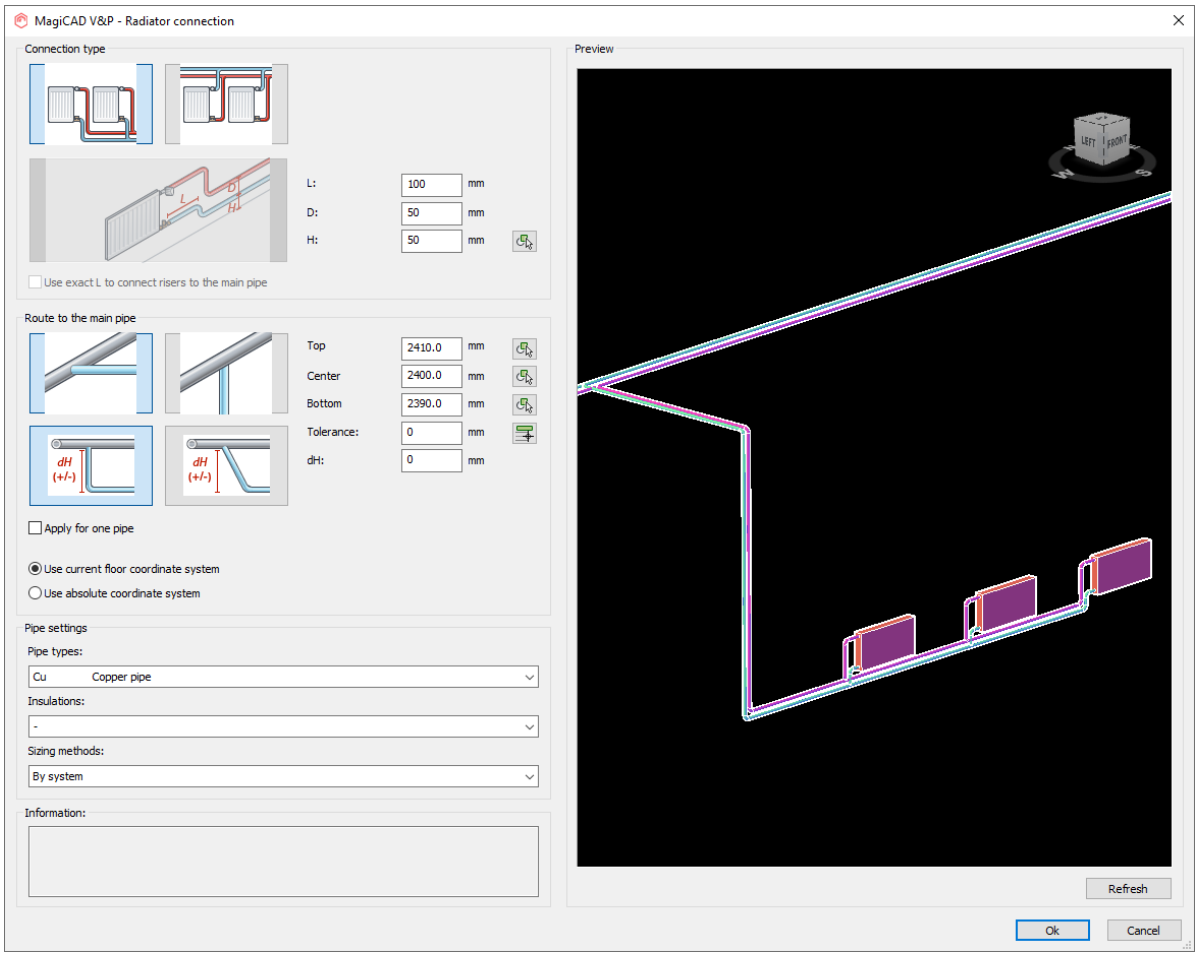
New radiator connection function

MagiCAD for AutoCAD did already automate part of the connecting of radiators to main pipes, while drawing, but this had to be done one radiator at a time and with limited connection options.

This has now been vastly improved with a new radiator connection function where the user can adjust several parameters and change connection options to choose from a wider range of different connection variations.

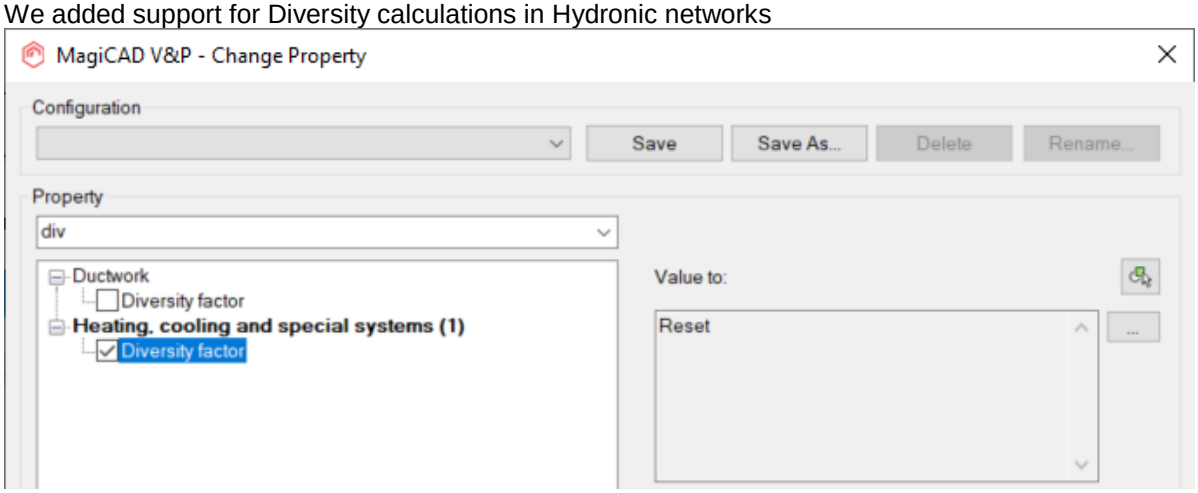
The user can also preview the different options before approving them, making it easy to see the result and making sure the optimal design is achieved.





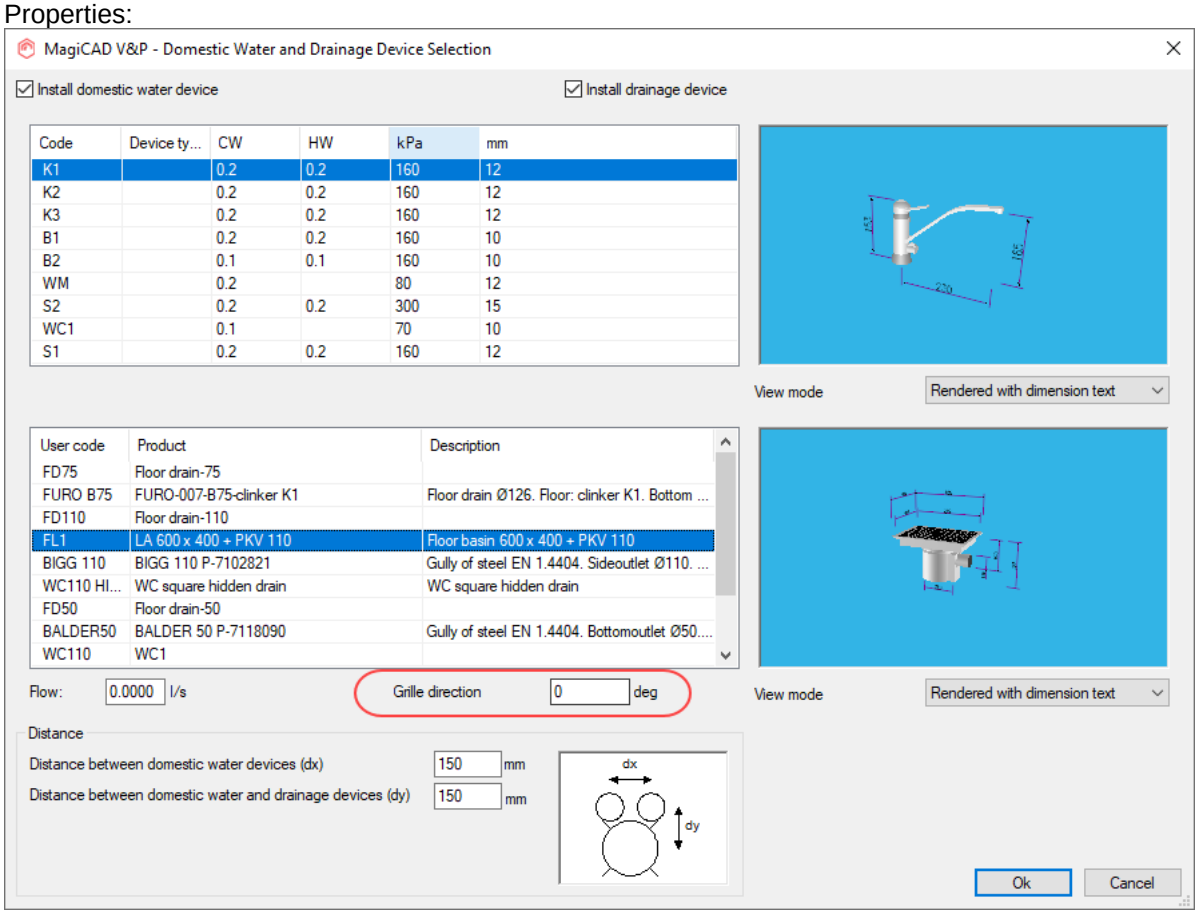
Diversity Calculations for Heating & Cooling Systems

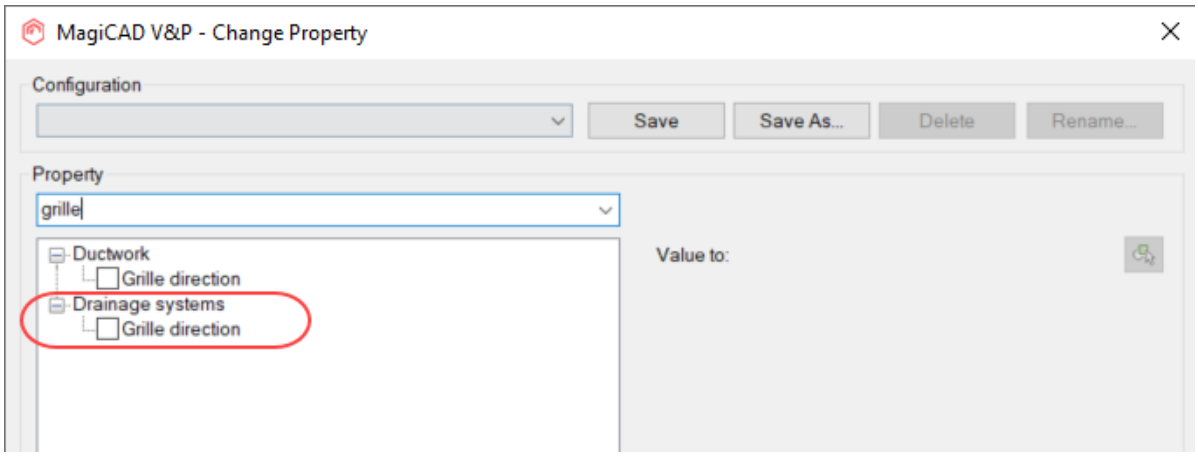
We added support for Diversity calculations in Hydronic networks



The grille direction for drainage devices has been added to the Installation dialog and Change properties

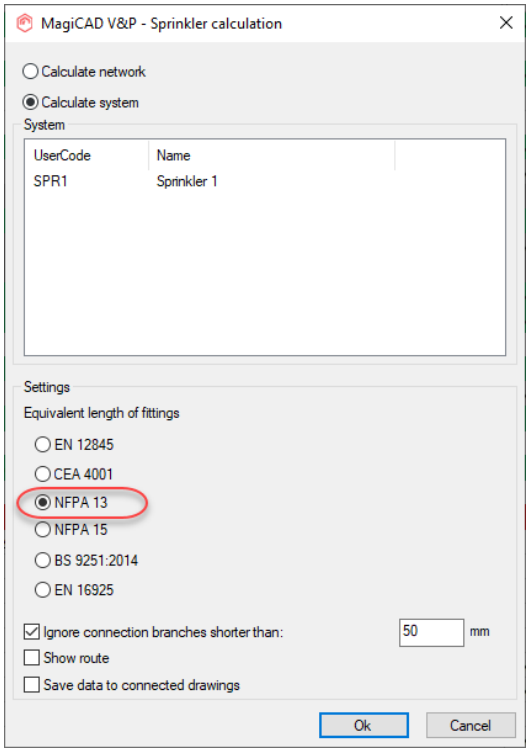
Grille direction has been added for drainage system devices in the Installation dialogue and Change Properties:





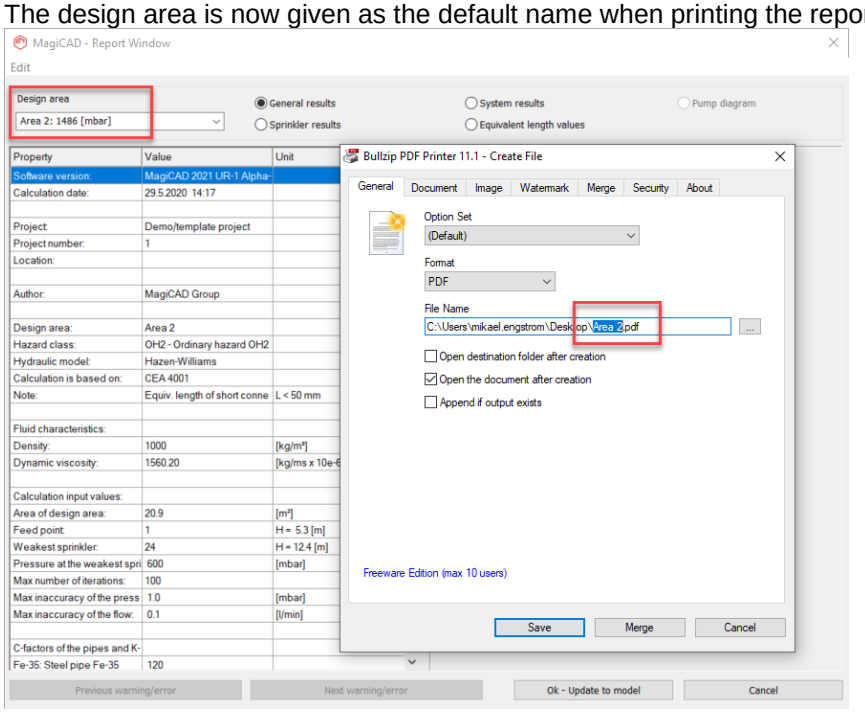
NFPA-13 sprinkler standard has been added to MagiCAD

The NFPA-13 standard wasn't available in MagiCAD, although the dialog incorrectly stated that it was (see the task under resolved issues - Incorrect text for sprinkler standard NFPA 15)
We have now added the actual NFPA-13 standard.



Automatic default file name when printing sprinkler the sprinkler report

The design area is now given as the default name when printing the report:



Improvements to the sprinkler report header
We added the same header in to sprinkler report which was in use in the other reports

Old:

General results

Property	Value	Unit
Software version:	MagiCAD 2021 UR-1 Alpha-6	

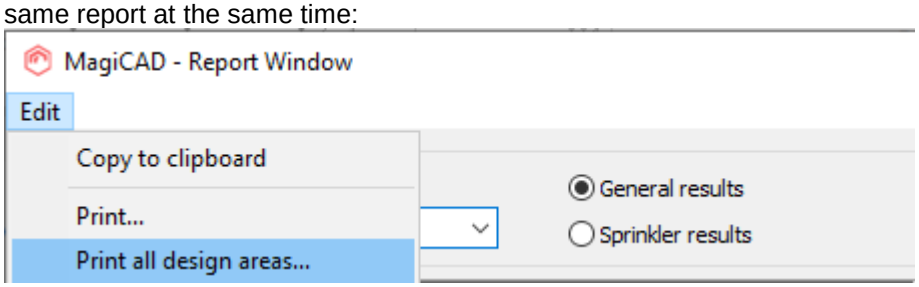
New:

MagiCAD **Sprinkler report**

General results: Area 1

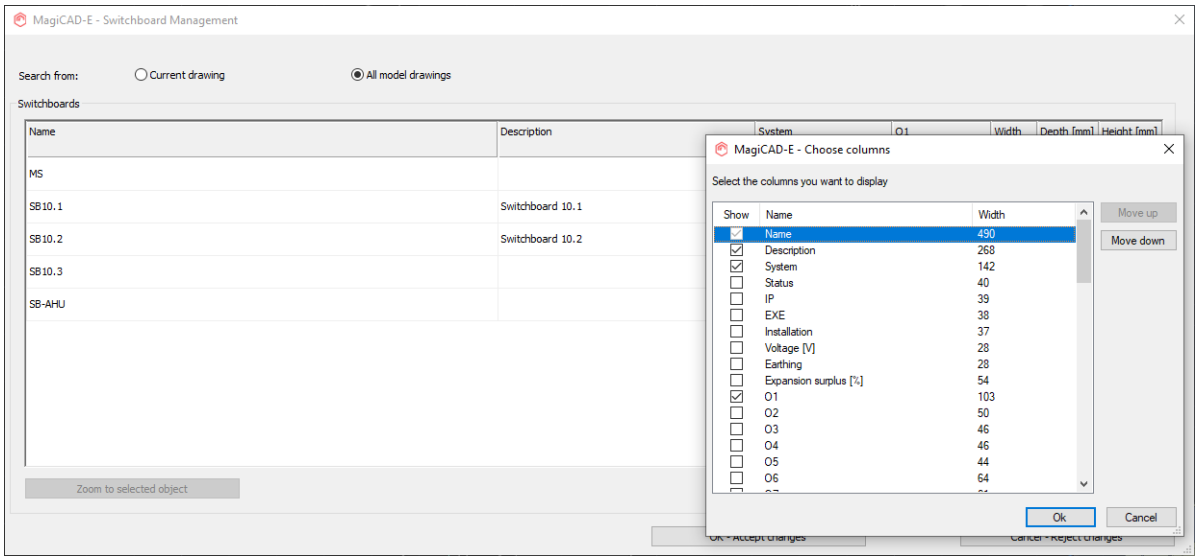
Property	Value	Unit
Software version:	MagiCAD 2021 UR-1 Alpha-7	

Printing all the calculated sprinkler design areas
When calculating multiple sprinkler design areas at the same time, you can now print them all to the same report at the same time:



1.3 Electrical

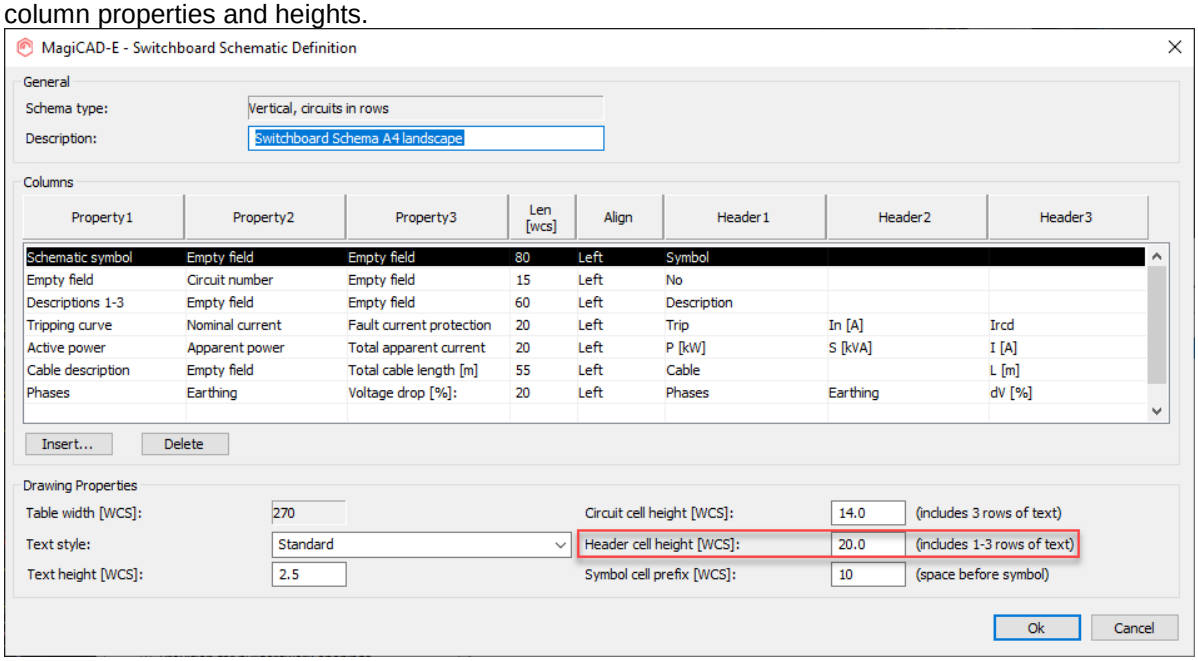
Enhancements to switchboard/host management
Elevations can be changed to hosts
Calculation related property columns are now available for switchboards
Changing elevations to switchboards/hosts changes also elevations of cables and cable packets connected to the switchboards/hosts
IFC types can be changed for both switchboards and hosts
Power values and automatic/manual calculation selection can be changed to switchboards
Short-circuit values and voltage drops can be shown for switchboards



Header cell height should be definable in switchboard schematic defs

It is now possible to define header cell height for vertical switchboard schematic. If defined cell height is smaller than the texts would require, a warning will be given.

With the old schematics the default height comes from the old calculation function that notices given column properties and heights.



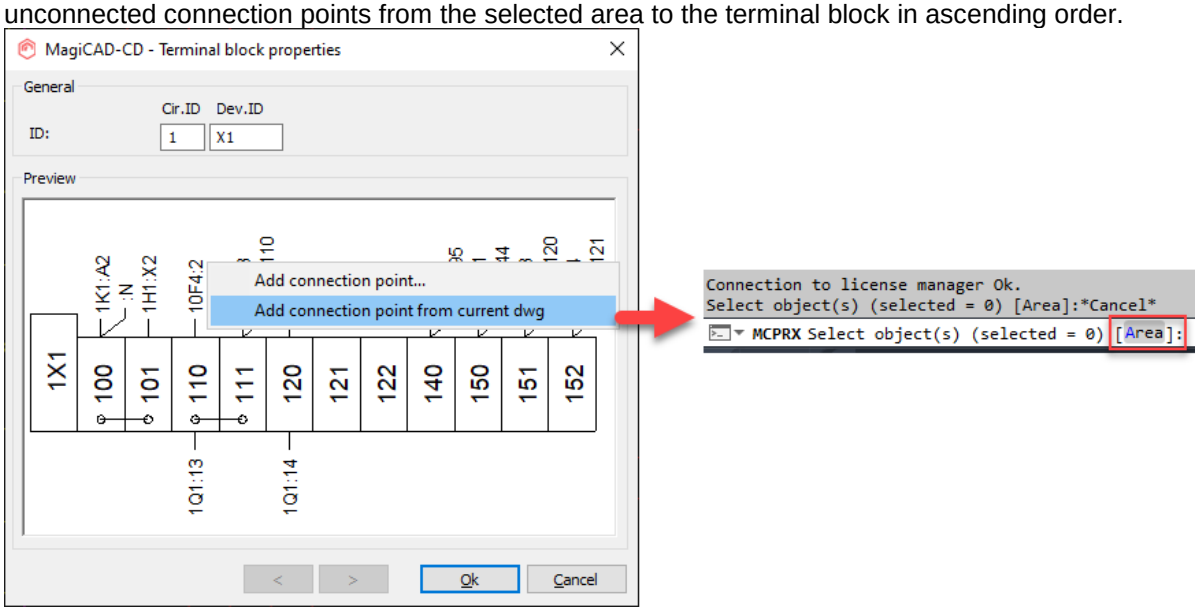
Note field for LED-stripes, lighting tracks and cable routes

"Product note" field has been added for LED-stripes, lighting tracks, cable trays and conduits.

1.4 Circuit designer

Area function when adding connection points to Terminal block

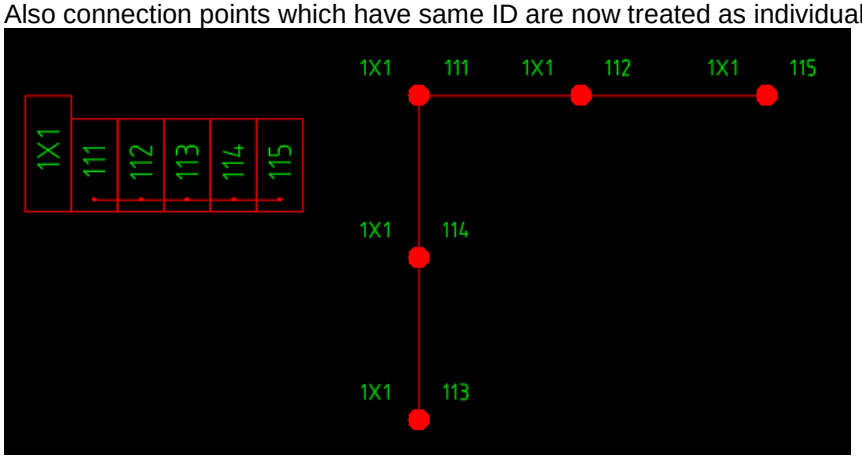
When adding connection points to Terminal block, you can now use "Area" function to get all unconnected connection points from the selected area to the terminal block in ascending order.



Jump wires in terminal blocks improvements

Connection points that are next to each other in a terminal block and are connected to each other are now shown with jumpers in all cases.

Also connection points which have same ID are now treated as individual connection points.



Change properties improvements

Editing your drawing is now much easier since a lot of new properties have been added to the Change Properties function.

It is now possible to change following properties from different object types:

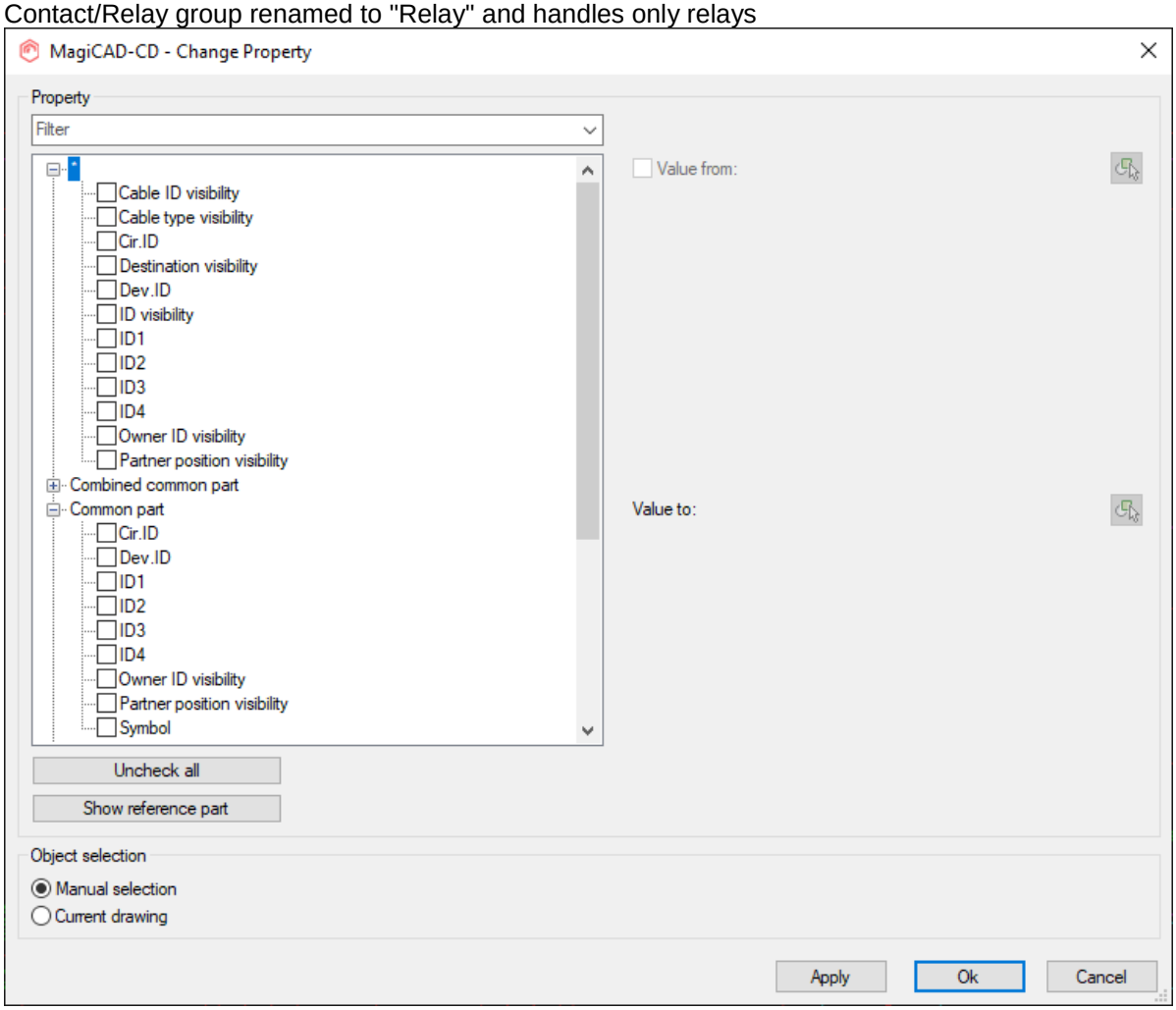
Owner ID visibility

Partner position visibility

ID visibility

Destination visibility

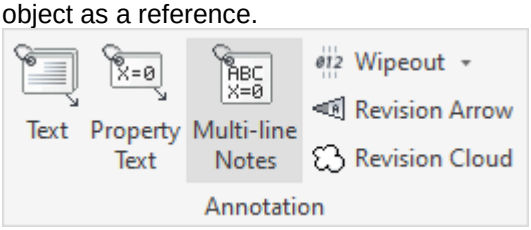
Cable ID visibility
Cable type visibility
Numbering rule
Symbol of child parts
ID1, ID2, ID3 and ID4
Also following adjustments have been done to make this work better:
Contact and switch are grouped together now under "Contact/Switch" group
Contact/Relay group renamed to "Relay" and handles only relays



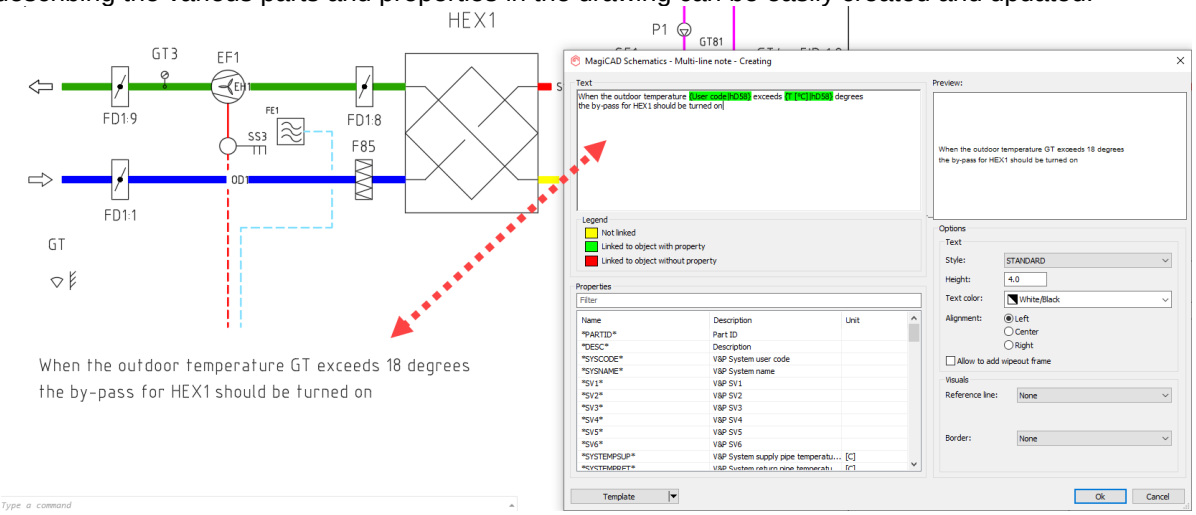
1.5 Schematics

Multi-line Notes with properties can now be created

We have now introduced a Multi-line Notes function with which the user can create a text where the property text values are part of the general text. This means that any updates and changes will be easily adjusted by the user. The text can be placed as a free text in the drawing or bound to a specific object as a reference.



All the properties in the same text can also be connected to different devices, meaning that a full text describing the various parts and properties in the drawing can be easily created and updated.



2 Resolved issues

2.1 Common

Selection set "Save"/"Save As" naming problem
When creating a Selection set, for example in IFC Export or Report, and then making some changes and clicking "Save" it instead saved it as a new Selection set, like when the user clicks "Save As", instead of saving over the selected one.
The issue has now been fixed and "Save" saves over the selected Selection set correctly.

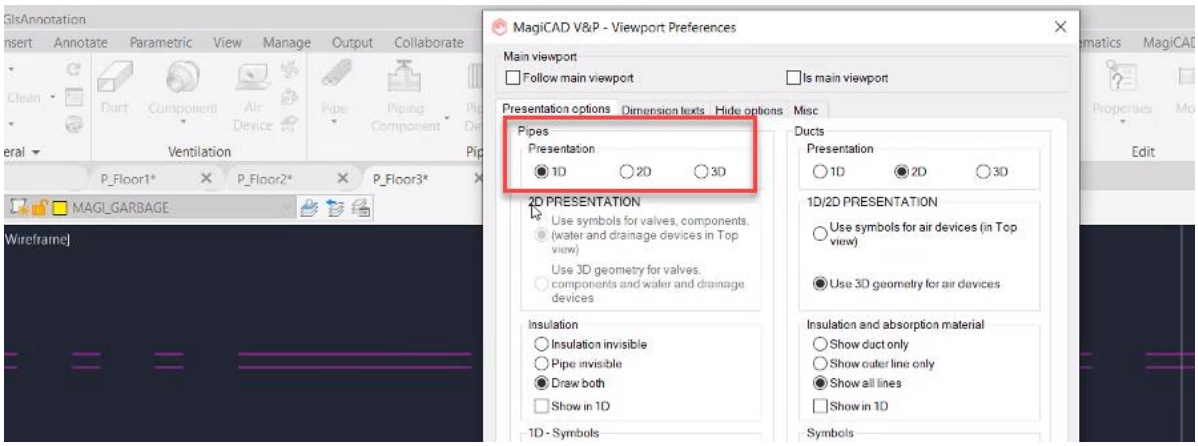
Rounding default changed led to updated the texts, that caused issues for some users
When users' texts with 2 decimals in MC2020 were opened in MC2021, MagiCAD automatically changed all existing texts to 3 decimal because the default value is 3 decimal.
This was due to us changing the precision of the absolute elevations from 2 to 3 decimals in AutoCAD's Properties Palette: Absolute elevations now have 3 decimals in AutoCAD's Properties Palette
This caused a lot of extra work for some users, where they would have to change and update a lot of dimension texts in the drawings.

Changes made now to address this issue:
Ventilation and Piping: Now absolute elevations are shown with 3 decimals in COM, Property Palette and IFC Export and with 2 decimals in Dimension texts, Part Properties and Reports.
Electrical: Now absolute elevations are shown with 2 decimals in dimension texts.

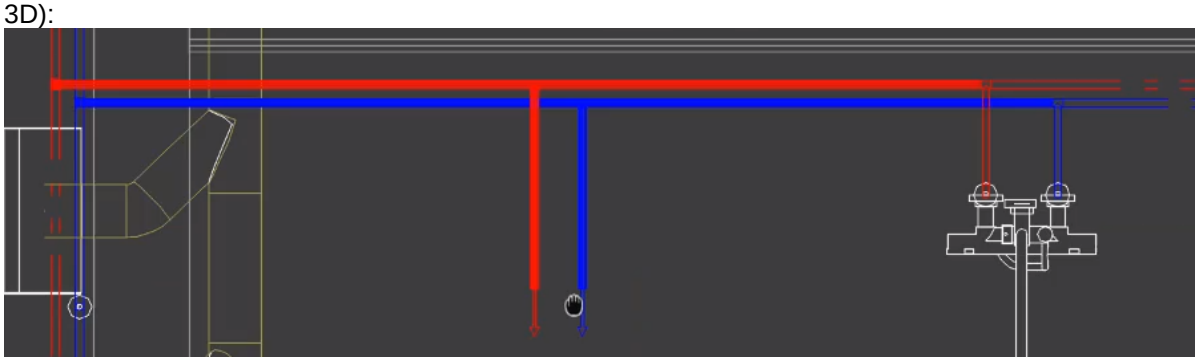
Some objects were incorrectly exported to the IFC
Some objects were incorrectly exported to the IFC, which resulted in them having the wrong shape.
This has now been fixed.

2.2 Ventilaion and Piping

Viewport presentation problems
The viewport settings did not always match what was set in the drawing. For example having more than one viewport open and maximizing could lead to this situation.
An example where the setting is set to 1D but the pipe in the drawing is in 2D:

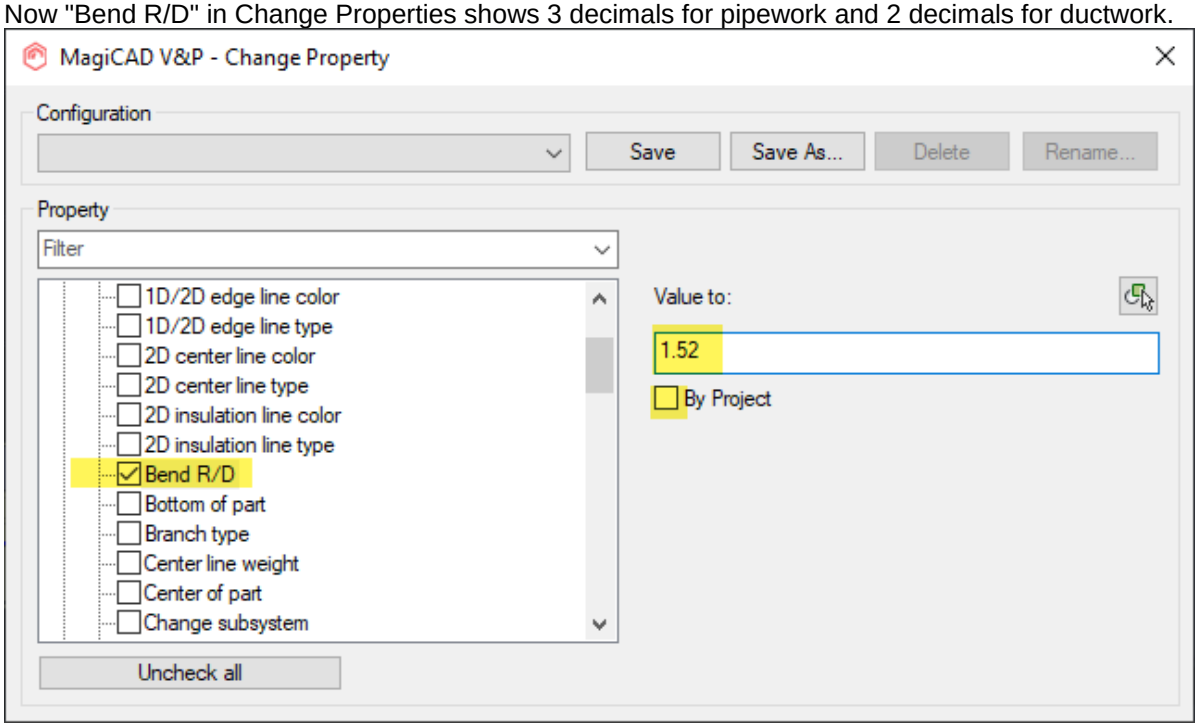


Sometimes one could see multiple "view settings" active in the drawing (below pipes as both 2D and 3D):

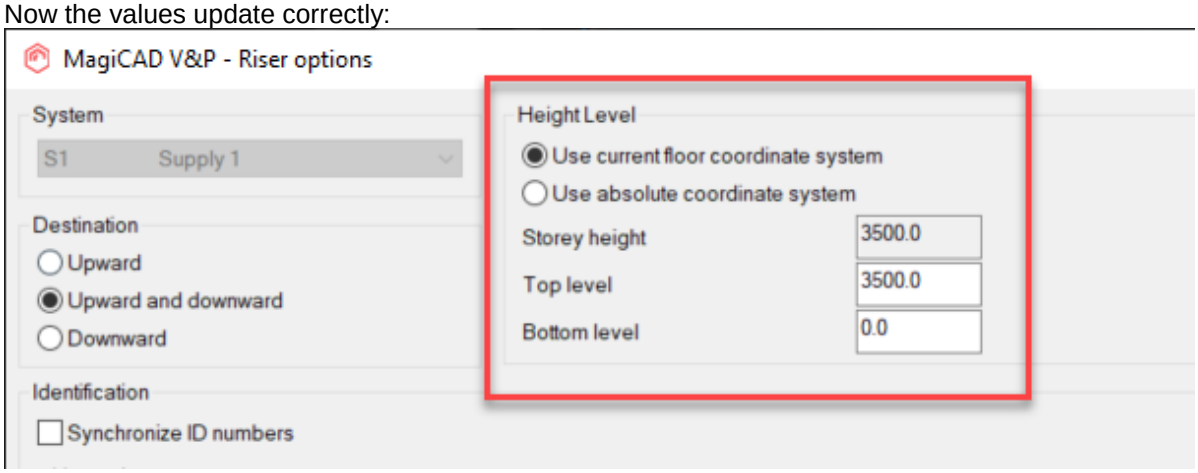


Only one decimal is shown in Change Properties for "Bend R/D"

Now "Bend R/D" in Change Properties shows 3 decimals for pipework and 2 decimals for ductwork.



Absolute coordinate system didn`t work with riser function
When drawing ducts and pipes and right-clicking and selecting "risEr" the riser dialog opened, but when switching between the current and absolute options, the top/botton values weren't updated and stayed the same.
Now the values update correctly:



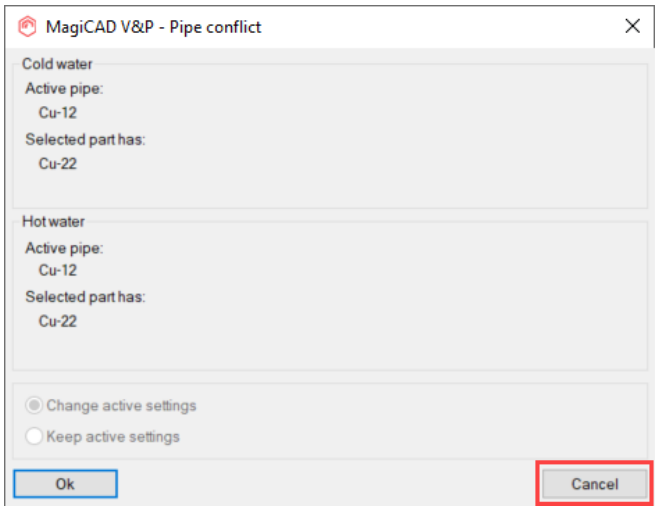
Issue with Branch- or Network selection with climate beams
Cooling beams with integrated reducers weren't selected when selecting elements using "Branch", "Network" and "Between":

```
Command: MAGISEL
Select parts [Single part/Branch/Network/sYstem/bEtween/beTween all/roOM/arEA/lAYout]:
```

The other parts of the network became selected, while the the cooling beams always remained unselected.
This has now been fixed and these cooling beams do also become selected.

The dptot value for cooling beams wasn't shown in the Property Palette and the IFC Export
The issue was that dptot was always shown as 0.0 for Cooling Beams in the AutoCAD Properties Palette and IFC Export, but MagiCAD's Part Properties showed the correct value.
Now the correct value is also shown in the Properties Palette and in the IFC Export.

"Canceling" wasn't done correctly after a Z-elevation change
When drawing from a water device and clicking on some main pipes you get the conflict dialog (if it is set ON in the user preferences) if there are some differences in the segment sizes.

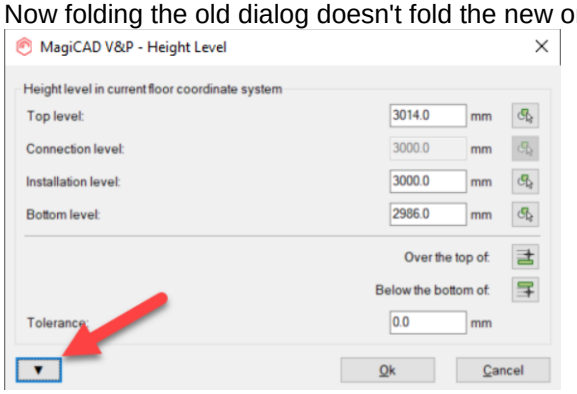


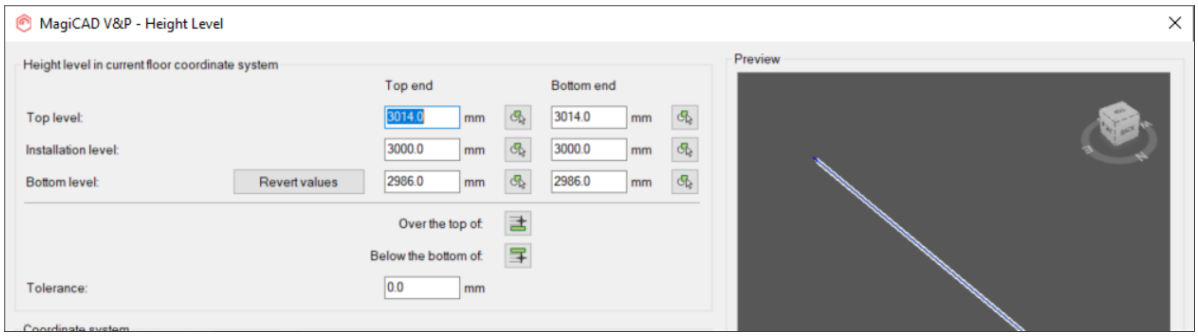
If you clicked "Cancel" here and then made some adjustments, for example to the Z-elevation to draw some other height first, then the pipes were immediately connected to the main pipes you previously clicked on, right after the Z-elevation dialog has been closed.
In other words did the function connect the pipes after showing the conflict dialog, regardless of if you chose "Cancel" and wanted to draw something else in between.

This has now been fixed and you can continue to draw normally after clicking "Cancel" in the conflict dialog and the function does not connect the pipes afterwards.

Folding the old Change Z dialog set the new dialog to become folded as well
In MCACA 2021 was the feature for elevation changes for drainage pipes implemented, which included a new dialog.
However when folding the old dialog, the new dialog did also become folded. The work around was to return to the old dialog and unfold it.

Now folding the old dialog doesn't fold the new one:



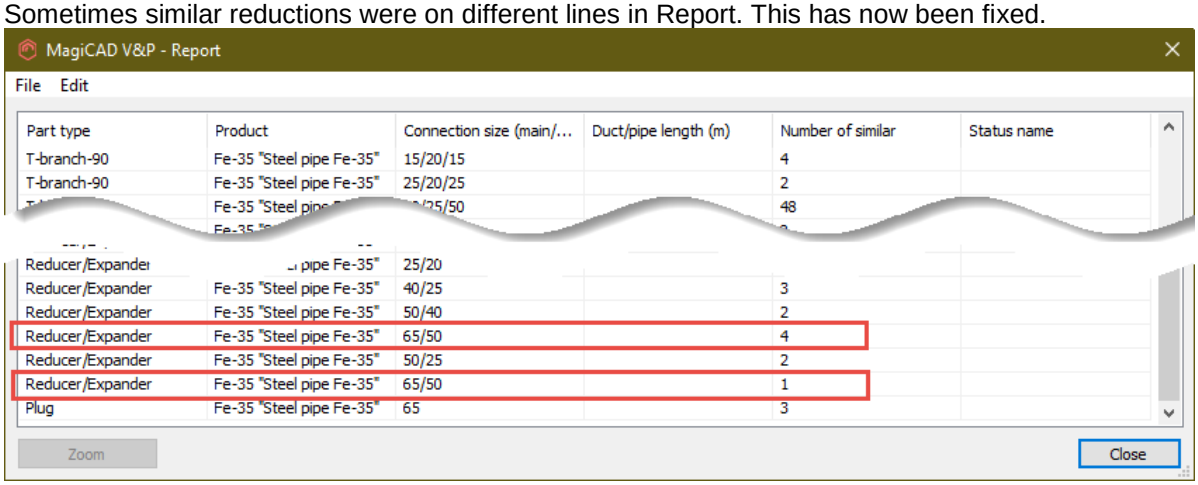


Changing duct size with Find & replace

Fixed an Issue with the dialog making it difficult to change the duct size with Find & Replace: You had to make the selection twice or cancel the dialog once to get it done.

The Report listed identical reducers to different lines

Sometimes similar reductions were on different lines in Report. This has now been fixed.



Part type	Product	Connection size (main/...	Duct/pipe length (m)	Number of similar	Status name
T-branch-90	Fe-35 "Steel pipe Fe-35"	15/20/15		4	
T-branch-90	Fe-35 "Steel pipe Fe-35"	25/20/25		2	
	Fe-35 "Steel pipe Fe-35"	/25/50		48	
Reducer/Expander	pipe Fe-35"	25/20			
Reducer/Expander	Fe-35 "Steel pipe Fe-35"	40/25		3	
Reducer/Expander	Fe-35 "Steel pipe Fe-35"	50/40		2	
Reducer/Expander	Fe-35 "Steel pipe Fe-35"	65/50		4	
Reducer/Expander	Fe-35 "Steel pipe Fe-35"	50/25		2	
Reducer/Expander	Fe-35 "Steel pipe Fe-35"	65/50		1	
Plug	Fe-35 "Steel pipe Fe-35"	65		3	

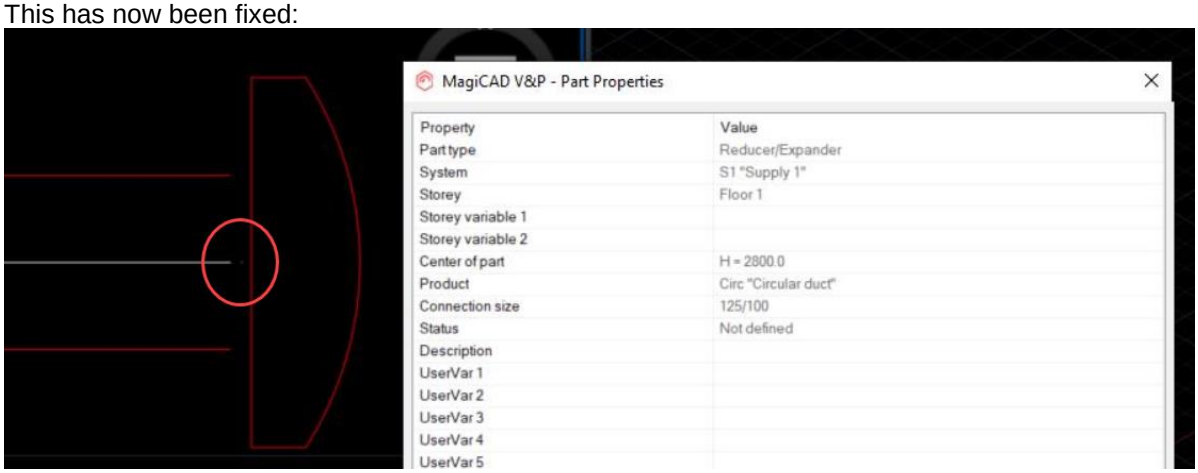
MCACA-2495 Air Handling Unit went to the wrong location during the installation

When installing an Air Handling Unit it was placed in a completely different location than where the user clicked.

The reason for this was handling of the coordinate system in AutoCAD and has now been fixed.

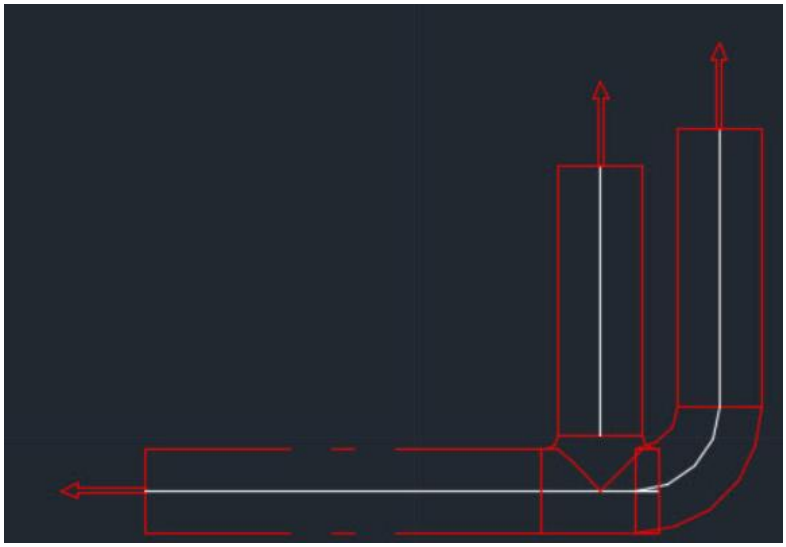
The reducer/expander wasn't drawn correctly between the duct and the air device

Only a "dot" was drawn in some cases instead of the reducer, between the duct and the air device.
This has now been fixed:



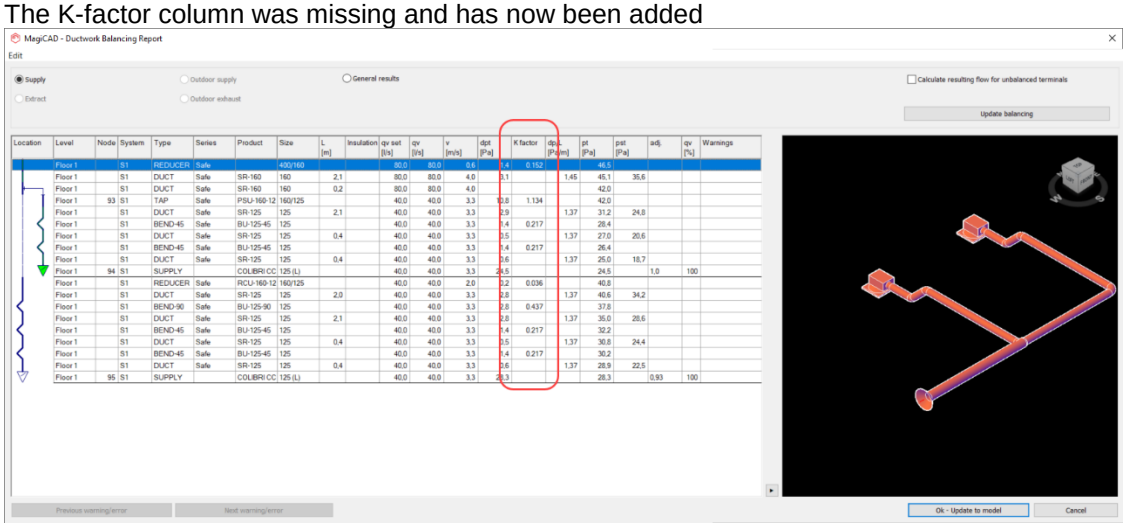
It was possible to move a fitting inside another fitting

It was possible to move a fitting inside another one if the "fit on len"-value was small enough. On greater values it correctly gave an error.
This has now been fixed.



The K-value wasn't shown in the Calculation report

The K-factor column was missing and has now been added



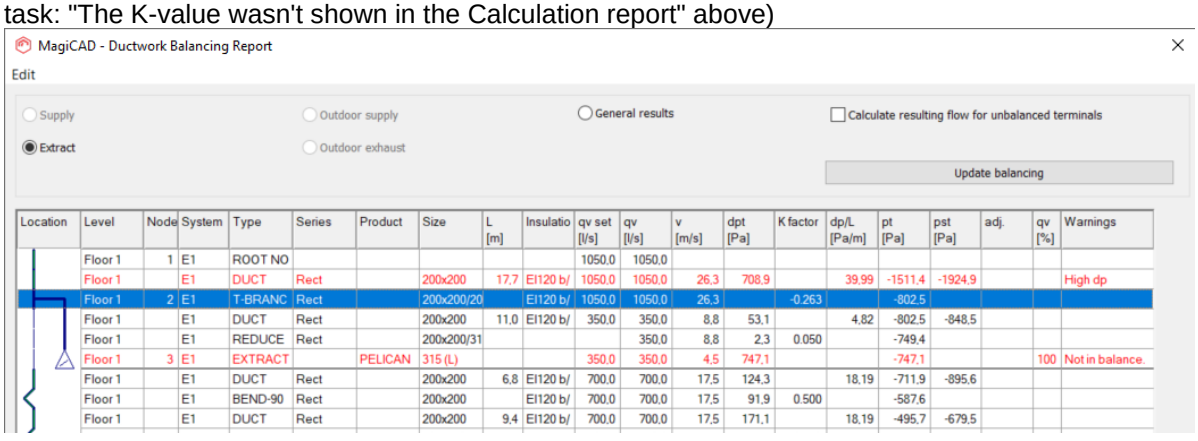
It is also available via Edit -> "Copy to clipboard" from the report:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Level	Node	System	Type	Series	Product	Size	L	Insulation	qv set	qv	v	dpt	K factor	dp/L	pt	pst	adj.	qv	Warnings
2								[m]		[l/s]	[l/s]	[m/s]	[Pa]		[Pa/m]	[Pa]	[Pa]		[%]	
3																				
4	Floor 1		S1	REDUCER	Safe		400/160			80	80	0,6	1,4	0.152		46,5				
5	Floor 1		S1	DUCT	Safe	SR-160	160	2,1		80	80	4	3,1		1,45	45,1	35,6			
6	Floor 1		S1	DUCT	Safe	SR-160	160	0,2		80	80	4				42				
7	Floor 1	93	S1	TAP	Safe	PSU-160-1	160/125			40	40	3,3	10,8	1.134		42				
8	Floor 1		S1	DUCT	Safe	SR-125	125	2,1		40	40	3,3	2,9		1,37	31,2	24,8			
9	Floor 1		S1	BEND-45	Safe	BU-125-45	125			40	40	3,3	1,4	0.217		28,4				
10	Floor 1		S1	DUCT	Safe	SR-125	125	0,4		40	40	3,3	0,5		1,37	27	20,6			
11	Floor 1		S1	BEND-45	Safe	BU-125-45	125			40	40	3,3	1,4	0.217		26,4				
12	Floor 1		S1	DUCT	Safe	SR-125	125	0,4		40	40	3,3	0,6		1,37	25	18,7			
13	Floor 1	94	S1	SUPPLY		COLIBRI CI	125 (L)			40	40	3,3	24,5			24,5		1	100	
14	Floor 1		S1	REDUCER	Safe	RCU-160-1	160/125			40	40	2	0,2	0.036		40,8				
15	Floor 1		S1	DUCT	Safe	SR-125	125	2		40	40	3,3	2,8		1,37	40,6	34,2			
16	Floor 1		S1	BEND-90	Safe	BU-125-90	125			40	40	3,3	2,8	0.437		37,8				
17	Floor 1		S1	DUCT	Safe	SR-125	125	2,1		40	40	3,3	2,8		1,37	35	28,6			
18	Floor 1		S1	BEND-45	Safe	BU-125-45	125			40	40	3,3	1,4	0.217		32,2				
19	Floor 1		S1	DUCT	Safe	SR-125	125	0,4		40	40	3,3	0,5		1,37	30,8	24,4			
20	Floor 1		S1	BEND-45	Safe	BU-125-45	125			40	40	3,3	1,4	0.217		30,2				
21	Floor 1		S1	DUCT	Safe	SR-125	125	0,4		40	40	3,3	0,6		1,37	28,9	22,5			
22	Floor 1	95	S1	SUPPLY		COLIBRI CI	125 (L)			40	40	3,3	28,3			28,3		0,93	100	

The K-value wasn't shown in the calculation report, if the dp of the fitting was negative

The K-factor was not shown in case it was negative.

Note: This was only noticed in MagiCAD for Revit, as the K-factor column was not visible earlier (see task: "The K-value wasn't shown in the Calculation report" above)



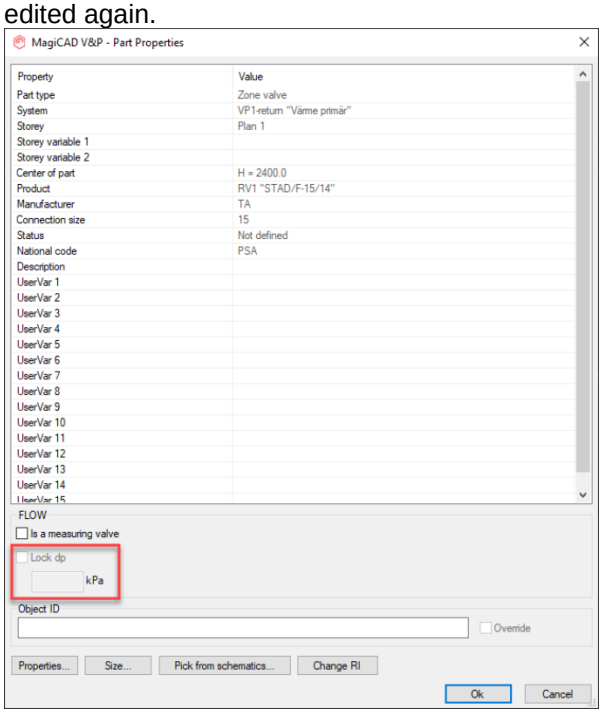
Location	Level	Node	System	Type	Series	Product	Size	L [m]	Insulatio	qv set [l/s]	qv [l/s]	v [m/s]	dpt [Pa]	K factor	dp/L [Pa/m]	pt [Pa]	pst [Pa]	adj.	qv [%]	Warnings
	Floor 1	1	E1	ROOT NO						1050,0	1050,0									
	Floor 1		E1	DUCT	Rect		200x200	17,7	EI120 b/	1050,0	1050,0	26,3	708,9		39,99	-1511,4	-1924,9			High dp
	Floor 1	2	E1	T-BRANC	Rect		200x200/20		EI120 b/	1050,0	1050,0	26,3		-0.263		-802,5				
	Floor 1		E1	DUCT	Rect		200x200	11,0	EI120 b/	350,0	350,0	8,8	53,1		4,82	-802,5	-848,5			
	Floor 1		E1	REDUCE	Rect		200x200/31				350,0	8,8	2,3	0.050		-749,4				
	Floor 1	3	E1	EXTRACT		PELICAN	315 (L)			350,0	350,0	4,5	747,1			-747,1			100	Not in balance.
	Floor 1		E1	DUCT	Rect		200x200	6,8	EI120 b/	700,0	700,0	17,5	124,3		18,19	-711,9	-895,6			
	Floor 1		E1	BEND-90	Rect		200x200		EI120 b/	700,0	700,0	17,5	91,9	0.500		-587,6				
	Floor 1		E1	DUCT	Rect		200x200	9,4	EI120 b/	700,0	700,0	17,5	171,1		18,19	-495,7	-679,5			

Description for radiators couldn't be deleted

The Description in radiators, in Part Properties, couldn't be deleted, only replaced with other texts. This has been fixed and the Description text can now be removed.

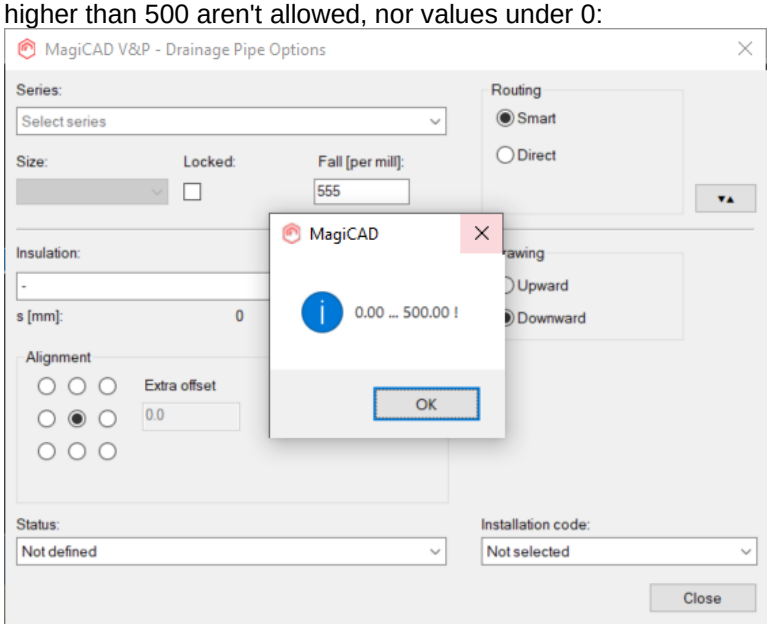
The "Lock dp"-field was disabled for balancing valve (zone valves)

The "Lock dp"-field was disabled in balancing valves. This issue has been fixed and the value can be edited again.



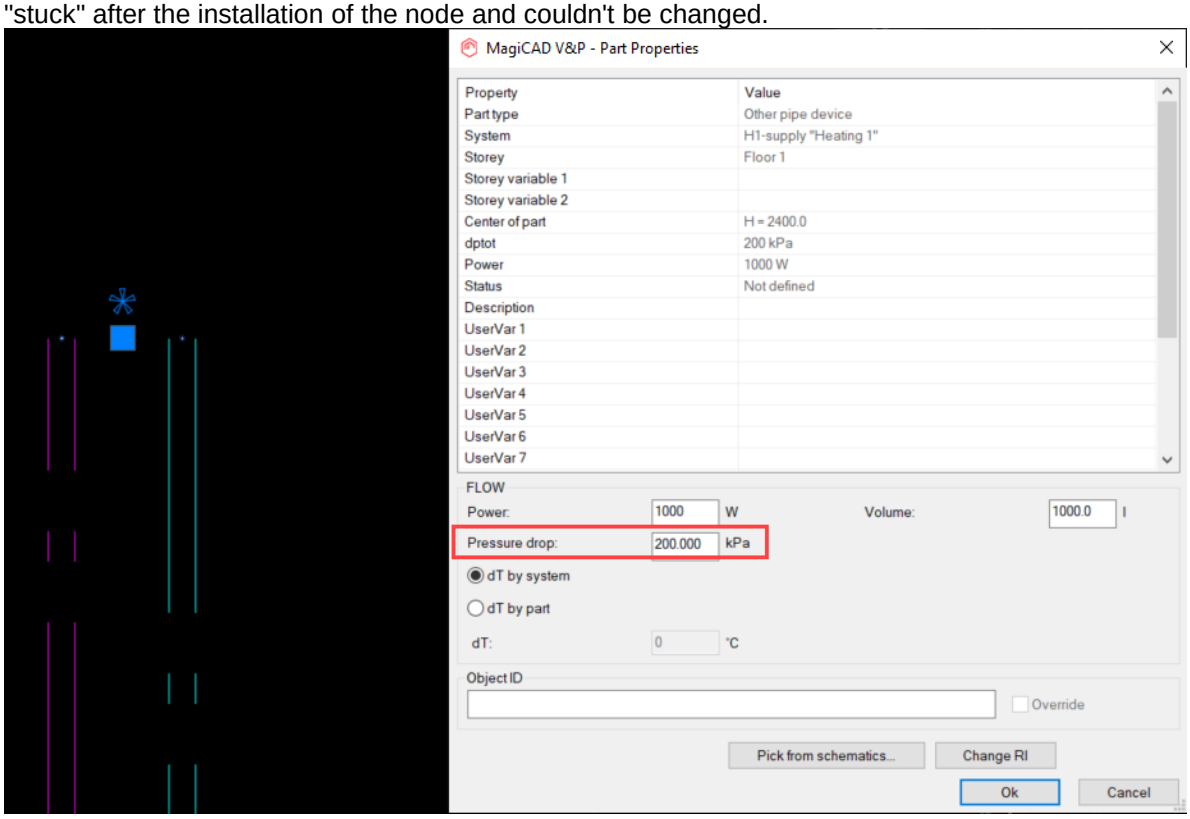
MagiCAD froze if "Fall per mil" was set to more than 500

MagiCAD froze if you set more than "500" as the value in the Drainage Pipe Options. Now values higher than 500 aren't allowed, nor values under 0:

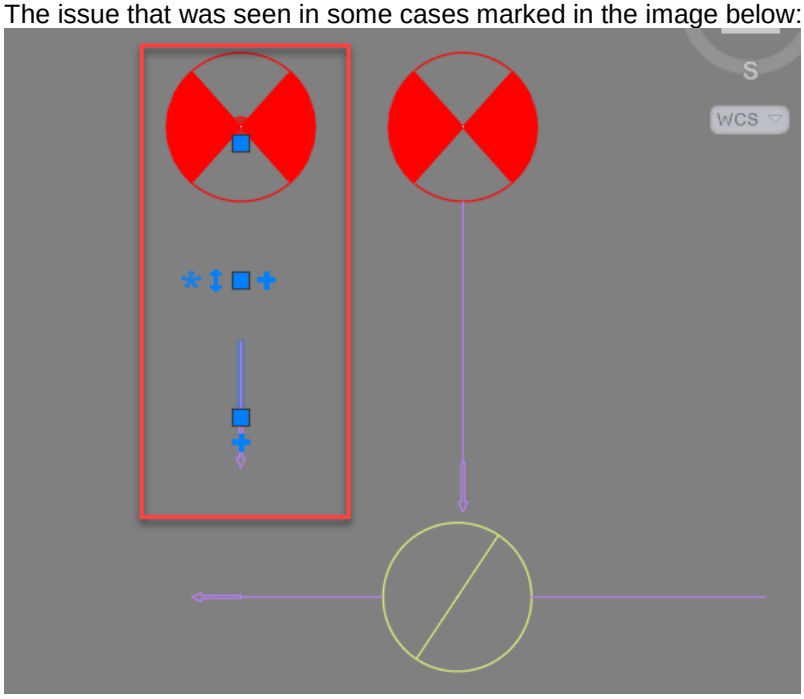


It wasn't possible to change the pressure drop in heating/cooling/special system nodes of type "None"

Fixed an issue related to changing the pressure drop of connection node "None". The value was "stuck" after the installation of the node and couldn't be changed.

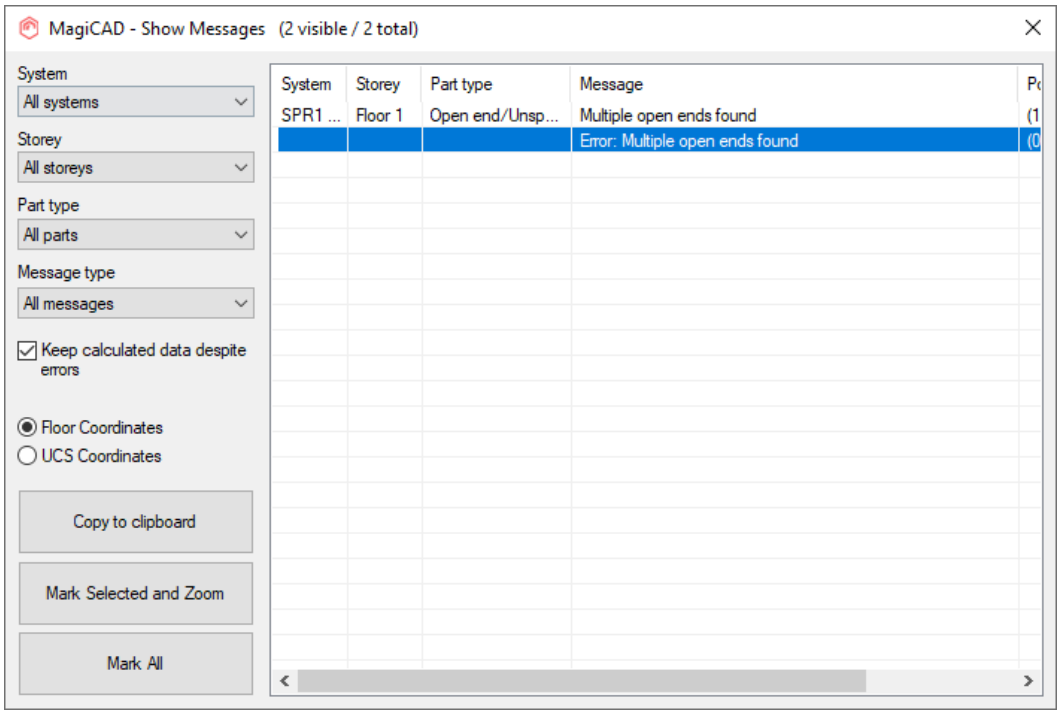


The pipe was hidden in different ways depending on the 2D-symbol, height and coordinates
Part of the pipe was cut short in the view in some cases. Now the full length is always shown, cut only by the symbol's edge.
The issue that was seen in some cases marked in the image below:



Drawing pipes using plus grips caused problems with some drainage devices
Drawing from some devices caused issues and the drawn pipe had the wrong size or even the geometry was wrong. This has now been fixed:

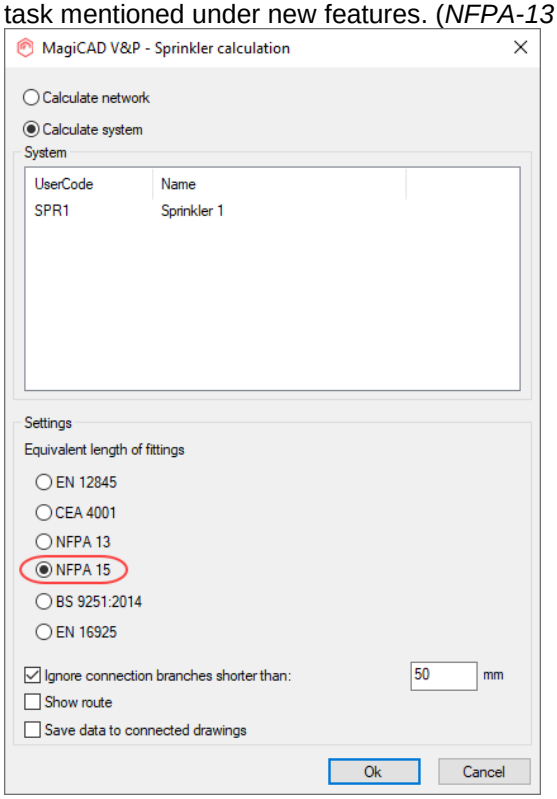
Sprinkler calculation did not show errors for open ends or unconnected connection nodes
The issue was that when running the sprinkler calculations and there were some open ends in the network, no error was shown, nor was the report opened so the user didn't know what the issue was. The function simply ran and then ended, without anything happening.
Now the error is correctly shown again in case there are issues in the network:



Incorrect text for sprinkler standard NFPA 15

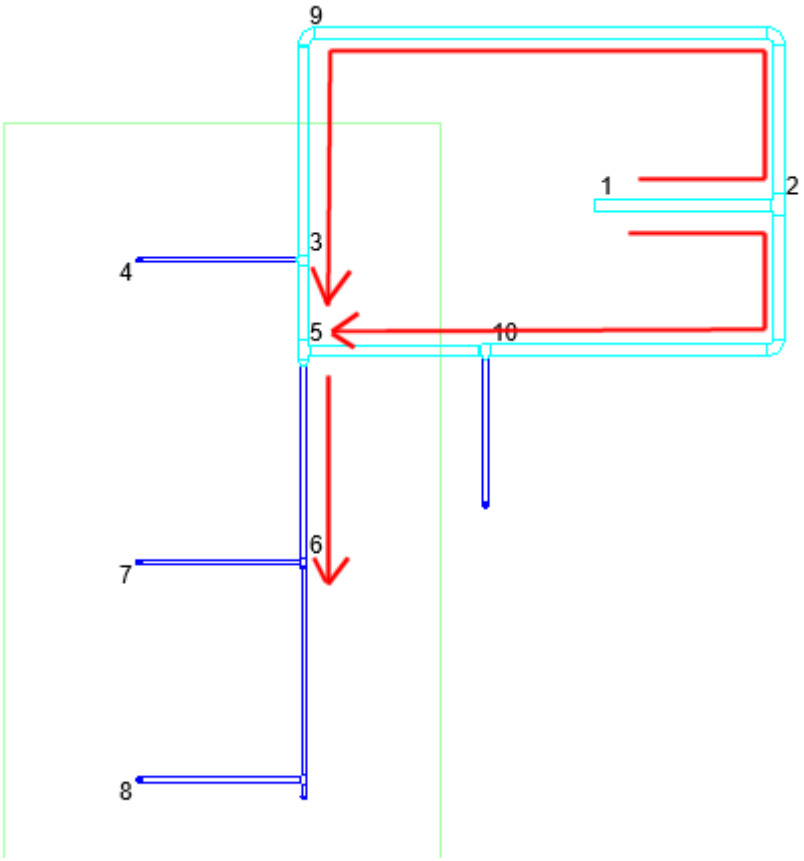
We changed the text NFPA 13 to NFPA 15 which is the standard that actually was in use and not NFPA 13 .

Note that we have also added the actual NFPA 13 standard to the calculations in this version - the task mentioned under new features. (*NFPA-13 sprinkler standard has been added to MagiCAD*)

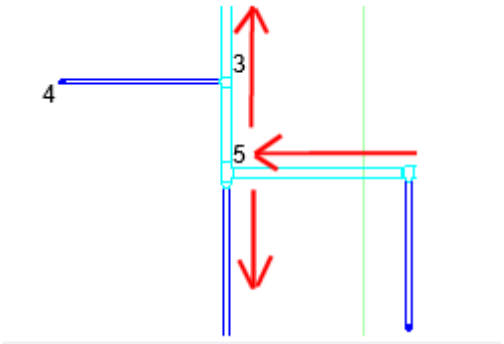


Equivalent length of the tee was calculated incorrectly in sprinkler systems
MagiCAD added incorrectly additional equivalent lengths. See the example below:

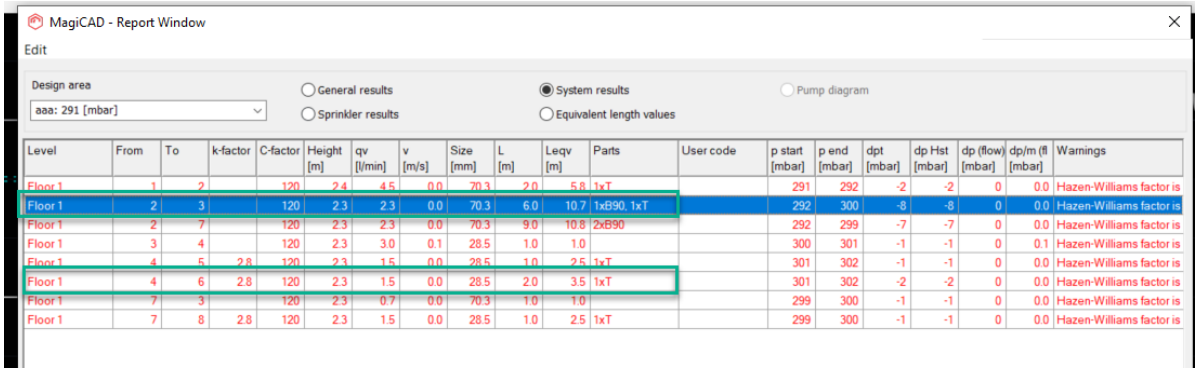
In the below system:
Previously MagiCAD added equivalent length to pipes 3->5 and 5->6 since the flow came to a tee branch. Since the flow doesn't turn to pipe 3->5, it was an incorrect addition. Now the equivalent tee is no more added to pipe 3->5



Note that for a bullhead tee, the Leqv is added to both pipes.

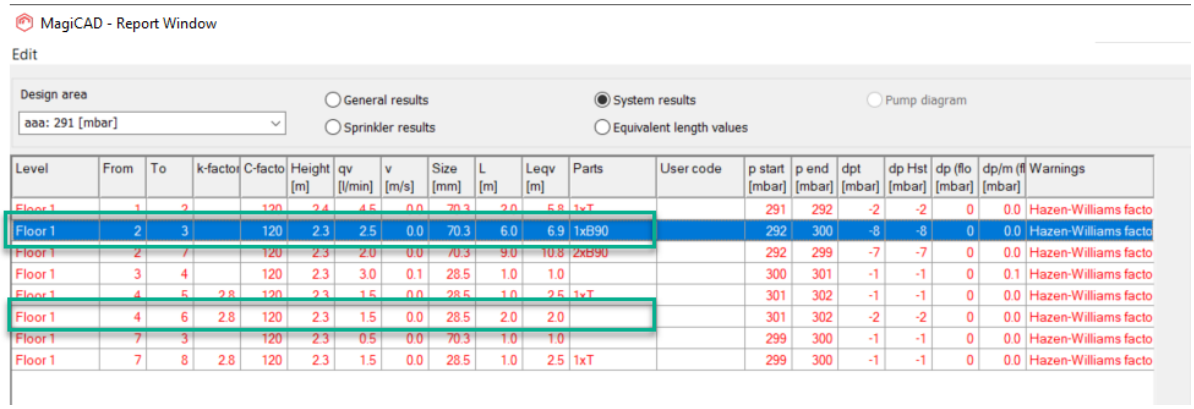


Previous version



Level	From	To	k-factor	C-factor	Height [m]	qv [l/min]	v [m/s]	Size [mm]	L [m]	Leqv [m]	Parts	User code	p start [mbar]	p end [mbar]	dpt [mbar]	dp Hst [mbar]	dp (flow) [mbar]	dp/m (fl [mbar]	Warnings
Floor 1	1	2		120	2.4	4.5	0.0	70.3	2.0	5.8	1xT		291	292	-2	-2	0	0.0	Hazen-Williams factor is
Floor 1	2	3		120	2.3	2.3	0.0	70.3	6.0	10.7	1xB90, 1xT		292	300	-8	-8	0	0.0	Hazen-Williams factor is
Floor 1	2	7		120	2.3	2.3	0.0	70.3	9.0	10.8	2xB90		292	299	-7	-7	0	0.0	Hazen-Williams factor is
Floor 1	3	4		120	2.3	3.0	0.1	28.5	1.0	1.0			300	301	-1	-1	0	0.1	Hazen-Williams factor is
Floor 1	4	5	2.8	120	2.3	1.5	0.0	28.5	1.0	2.5	1xT		301	302	-1	-1	0	0.0	Hazen-Williams factor is
Floor 1	4	6	2.8	120	2.3	1.5	0.0	28.5	2.0	3.5	1xT		301	302	-2	-2	0	0.0	Hazen-Williams factor is
Floor 1	7	3		120	2.3	0.7	0.0	70.3	1.0	1.0			299	300	-1	-1	0	0.0	Hazen-Williams factor is
Floor 1	7	8	2.8	120	2.3	1.5	0.0	28.5	1.0	2.5	1xT		299	300	-1	-1	0	0.0	Hazen-Williams factor is

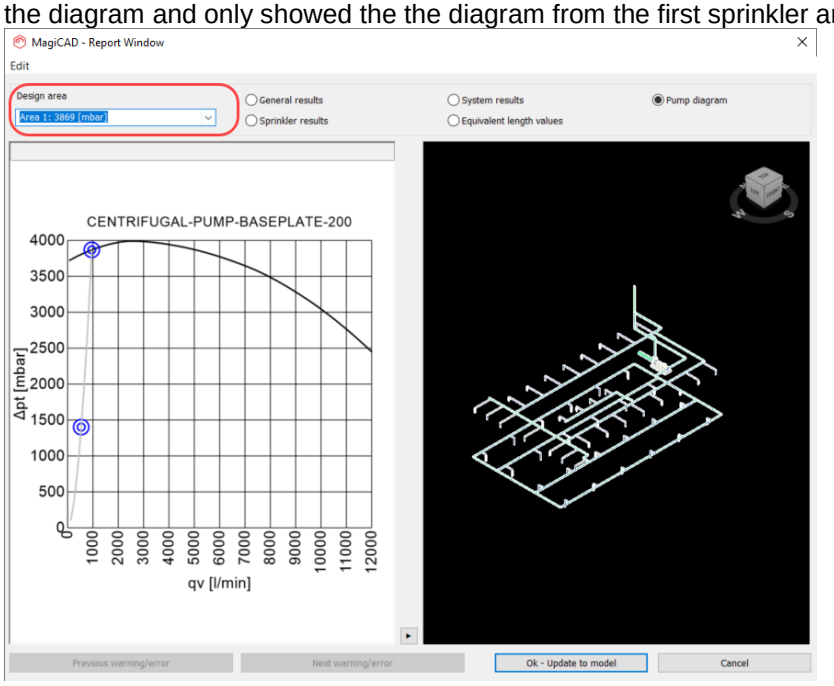
New fix:



Level	From	To	k-factor	C-facto	Height [m]	qv [l/min]	v [m/s]	Size [mm]	L [m]	Leqv [m]	Parts	User code	p start [mbar]	p end [mbar]	dpt [mbar]	dp Hst [mbar]	dp (flo [mbar]	dp/m (fl [mbar]	Warnings
Floor 1	1	2		120	2.4	4.5	0.0	70.3	2.0	5.8	1xT		291	292	-2	-2	0	0.0	Hazen-Williams facto
Floor 1	2	3		120	2.3	2.5	0.0	70.3	6.0	6.9	1xB90		292	300	-8	-8	0	0.0	Hazen-Williams facto
Floor 1	2	7		120	2.3	2.0	0.0	70.3	9.0	10.8	2xB90		292	299	-7	-7	0	0.0	Hazen-Williams facto
Floor 1	3	4		120	2.3	3.0	0.1	28.5	1.0	1.0			300	301	-1	-1	0	0.1	Hazen-Williams facto
Floor 1	4	5	2.8	120	2.3	1.5	0.0	28.5	1.0	2.5	1xT		301	302	-1	-1	0	0.0	Hazen-Williams facto
Floor 1	4	6	2.8	120	2.3	1.5	0.0	28.5	2.0	2.0			301	302	-2	-2	0	0.0	Hazen-Williams facto
Floor 1	7	3		120	2.3	0.5	0.0	70.3	1.0	1.0			299	300	-1	-1	0	0.0	Hazen-Williams facto
Floor 1	7	8	2.8	120	2.3	1.5	0.0	28.5	1.0	2.5	1xT		299	300	-1	-1	0	0.0	Hazen-Williams facto

Switching between sprinkler areas in the sprinkler report didn't work

Now when switching Sprinkler Area the pump diagram updates correctly. Previously it didn't update the diagram and only showed the the diagram from the first sprinkler area.



2.3 Electrical

Elevation problem on uneven sizes (MCE)
Elevation dialog for trays no longer shows trailing zeroes in decimals.
You can now define to show up to 6 decimals for dimensions text varaibles.
Elevation properties are now shown in Part Properties by using one extra decimal (when needed) and automatic zero decimal suppression:
When 1 wcs = 1 mm: Max accuracy is one decimal
When 1 wcs = 1m : Max accuracy is four decimals
X,Y,Z point information is shown as before by using old decimal accuracy (1wcs=1mm: 0 decimals / 1wcs=1m: 3 decimals). This way it is more easier/clearer for the user to read x,y,z point information.

Devices don't get switchboard reference
If cable end point is at the same position as objects installation point and somehow they are not connected, Update drawing data with Circuit references based on power cable connections will now connect the cable to the object.

Fatal error when taking Part Properties
A converted Autocad object that is copied to another drawing which is not connected to a project no longer gives a fatal error when running Part Properties on it.

Changing product ID with Change column value makes a copy
Now it is not possible to edit ID using "Change column values..." functionality for devices and backboxes.
"Change column value" functionality can be used to edit IDs when using Project Manager application.

Viewports are not read correctly after reopening dwg
If multiple viewports are open in a drawing and some of them has other than "2D Wireframe" selected for visual style, MagiCAD viewport preferences were not read properly. Now saved viewport preferences are read correctly when opening a drawing.

Switchboard/host reference lost when copy-pasting only circuit symbols via clipboard AND referred switchboard/host was in same dwg
Fixed a problem when switchboard/host reference was lost when copy-pasting only circuit symbols via clipboard and the referred switchboard/host was in the same DWG.

Installation level, absolute m printout errors
Fixed elevation properties printing when "1 wcs = 1 m" unit system is used
Fixed following MCE objects' elevation properties printing:
Switchboard and Host device
Switchboard Area and Host Area
Switchboard Border and Host Border

Enter does not work when installing electrical devices
Now "Enter" key closes the dialog same way as "Ok" button and "Esc" key closes the dialog same way as "Cancel" button even after user has selected another product.

IDs over 10 000 are showing as - in the Project
IDs over 10 000 were not shown properly in the Project. Now they are visible.

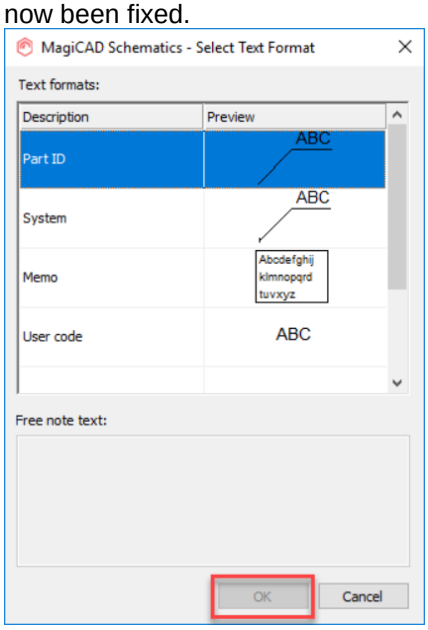
2.4 Circuit designer

Problems with switches in CD
Switches got duplicate ID tags, now duplicated tags are removed.

Fixed IDs when copying child parts
When copying child part without the mother part, Circuit ID and Device ID are cleared from the new object.
From unconnected child part, nothing is cleared on copy

2.5 Schematics

The OK-button was disabled in Schematics Text
The "OK"-button was immediately disabled when selecting Text in Schematics, but became active once some other text was selected in between.
This meant that the user wasn't able to select the first text immediately, but had to select some other text in between and then select the actual text that the user wanted to place in the drawing. This has now been fixed.



3 Manufacturer Apps

MagiCAD Manufacturer Apps are additional design tools that help users to select and configure the correct products for their projects' needs. Once the desired product has been configured and/or selected, it can be inserted directly into the MagiCAD or Revit project as a BIM object with correct technical information.

Manufacturer Apps published during 2020

MagiCAD Cloud Selection tools can be accessed through *MagiCAD Connect*.

Blücher – Drainage devices Description
Discipline: Drainage
Product Types: Drainage devices

ETS NORD – Kitchen Hoods Description
Discipline: Ventilation
Product Types: Kitchen ventilation products

SEWATEK – Service penetration units Description
Discipline: Piping
Product Types: Service penetration units

Tovenco – Kitchen Hoods Description
Discipline: Ventilation
Product Types: Kitchen hoods

Vallox – Air handling units Description
Discipline: Ventilation
Product Types: Air Handling Units

MagiCAD Plugins can be accessed through *MagiCAD Plugin Manager*, an extension which helps users to install plugins directly from the MagiCAD user interface.

Bevent Rasch – Roof cowls, silencers Description
Selection Software:Dimensio
Discipline: Ventilation
Product Types: Roof cowls, silencers